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THE SURVEY

MARCH 1921

Monthly News Bulletin of the Bureau of Biological Survey
United States Department of Agriculture

Vol. 2.

Washington, D. C., January, 1921.

No. 1.

THE SURVEY is issued for office and field men of the Biological Survey under authorization of the Chief of Bureau as a medium for furnishing information regarding the work of the Bureau, movements of the staff, changes in assignments, and news and personal items of importance, with a view to increasing the interest of the personnel in the work of the Bureau as a whole and in each one's individual work as related to it. It is intended primarily for employees and is not in any sense a publication.

GENERAL NOTES

With this issue, THE SURVEY enters upon its second year, and, encouraged by the letters of commendation received from field men of all Divisions, and by the approval of employees in the Washington office, there is in prospect a year of even greater usefulness than the one just concluded. The personnel of the committee in charge remains as heretofore - Dr. W. B. Bell, chairman; Mr. W. C. Henderson, Mr. W. Roy Dillon, Dr. T. S. Palmer, Mr. E. F. Kalmoech, and Mr. E. A. Preble; and Mr. Wm. H. Cheesman, editor.

Publications issued during December were as follows -

Annual report of the Chief of Bureau; pp. 36, issued December 3.

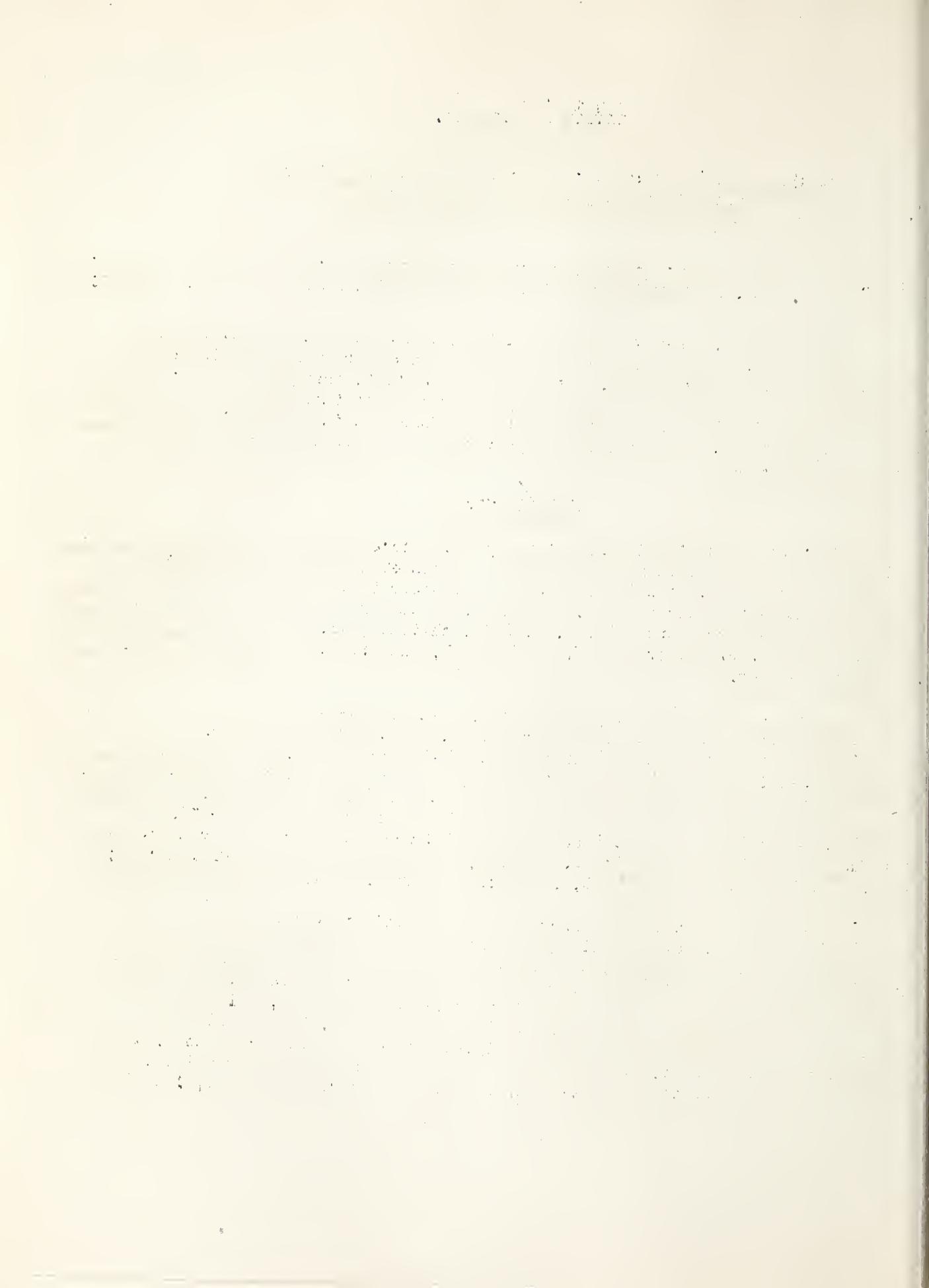
Department Circular 135, "Maintenance of the Fur Supply," by Ned Dealborn, Assistant Biologist; pp. 12, pls. 9, title-page drawing by Seton; issued December 6.

Service and Regulatory Announcement, B. S. 37, "Hunting permitted on Parts of Deer Flat Reservation in the State of Idaho"; p. 1; issued December 23.

Department Bulletin 862, "Food Habits of Seven Species of American Shoal-water Ducks," by the late Douglas C. Mabbott, Assistant in Economic Ornithology; pp. 67, pls. 7; issued December 30, received January 4, 1921.

In connection with the issuance of Mr. Mabbott's report on duck foods (Dept. Bull. 862), the following is quoted from the first page:

"Douglas Clifford Mabbott, author of this bulletin, was a member of the Heroic Sixth Regiment, United States Marine Corps, and participated in all the hard fighting done by that organization at Bouresches, Belleau Wood, Soissons, and in the St. Mihiel salient. He was killed in action September 15, 1918, while taking part in an advance in the battle of St. Mihiel, and was buried near the village of Xammie, near Thiaucourt, France. He was born at Arena, Wis., March 12, 1893, and became a member of the staff of the Biological Survey, December 1, 1915."



During December the following manuscripts for outside publication were submitted for approval:

Bailey, Vernon: "Capturing Small Mammals for Study," for the Journal of Mammalogy.

Gabrielson, I. N.: "A One-day List of Birds at East Falls Church, Virginia," for the Wilson Bulletin.

Landon, C. R.: "Predatory Animal Control Work in Texas," for the Angora Journal, Portland, Oreg.

McAtee, Preble, and Harper: "Christmas Bird Census about Washington," for Bird-Lore.

Nelson, E. W.: "Review of the Burgess Animal Book for Children."

Mrs. Shirley F. Wolstencroft resigned as stenographer in the Office of Accounts, where she has served since January 20, 1919. The position has been filled by the transfer of Miss Ethel N. Jett, from the Forest Service.

Mr. Harry G. Seller, of Alaska, Alaska, formerly in the employ of the Bureau of Education, was appointed deputy fur warden, for service in Alaska, on December 21, 1920. He is located in the southern part of Kodiak Island, where he will be of considerable assistance to the Bureau in an educational move to acquaint natives and others with the importance of observing laws protecting fur bearers and of putting a stop to illegal exports of furs.

BIOLOGICAL INVESTIGATIONS

Since the mention in the October number of THE SURVEY of the operation of Mr. H. S. Osler's duck trap at Lake Scugog, Ont., the Division has received a number of interesting "return" records. Mr. Osler trapped and banded about 250 ducks, mostly mallards and black ducks, with a few blue-winged teals and ring-necked ducks. Of these, between twenty and twenty-five have been killed and the bands returned or reported on during the season just closed. Some of course were taken close to Lake Scugog, but others were from such distances as to indicate with precision the route of these birds in their flight to the Gulf coast.

Bands were returned from points in Ohio, Indiana, Kentucky, Tennessee, Arkansas, Mississippi, Louisiana, and Texas. On the Atlantic coast no banded birds were reported from regions north of Chesapeake Bay, but from that point south the route is well connected, bands having been returned from Virginia, North Carolina, and Florida. Perhaps the greatest interest attaches to a return just received through the State Department from the American consul on the island of Trinidad: the band that had been placed on a blue-winged teal at Lake Scugog, on September 24, 1920, was recovered through a local hunter near Port of Spain, Trinidad, on December 9.

These records obtained from the operations of Mr. Osler are indicative of what is to be expected from the Survey's project of the systematic banding of migratory birds.

In accordance with their annual custom, Messrs. W. L. McAtee, E. A. Preble, and Francis Harper made a "Christmas" bird census on December 29, of a large tract of varied country in the vicinity of Mount Vernon, Va. Although no unusual winter visitors were seen, with the exception of horned larks, a total of 44 species was recorded. Messrs. McAtee and Preble, usually in association with one or two other observers, have made similar counts practically every year since 1911.



Mr. G. G. Cantwell is continuing field investigations in northern Washington.

Mr. Vernon Bailey is continuing his studies of the injurious rodents of the Southwest, his present field of operations being the region about Continental, Ariz. on the slopes of the Santa Rita Mountains.

ECONOMIC INVESTIGATIONS.

Mr. J. Stokley Ligon, Predatory Animal Inspector of New Mexico, who has been working on a special detail in Missouri and Michigan, is expected to arrive at the Washington Office about the middle of January. He will then spend some time in completing a manuscript on the habits and means of control of wolves, on which he has been engaged for some time.

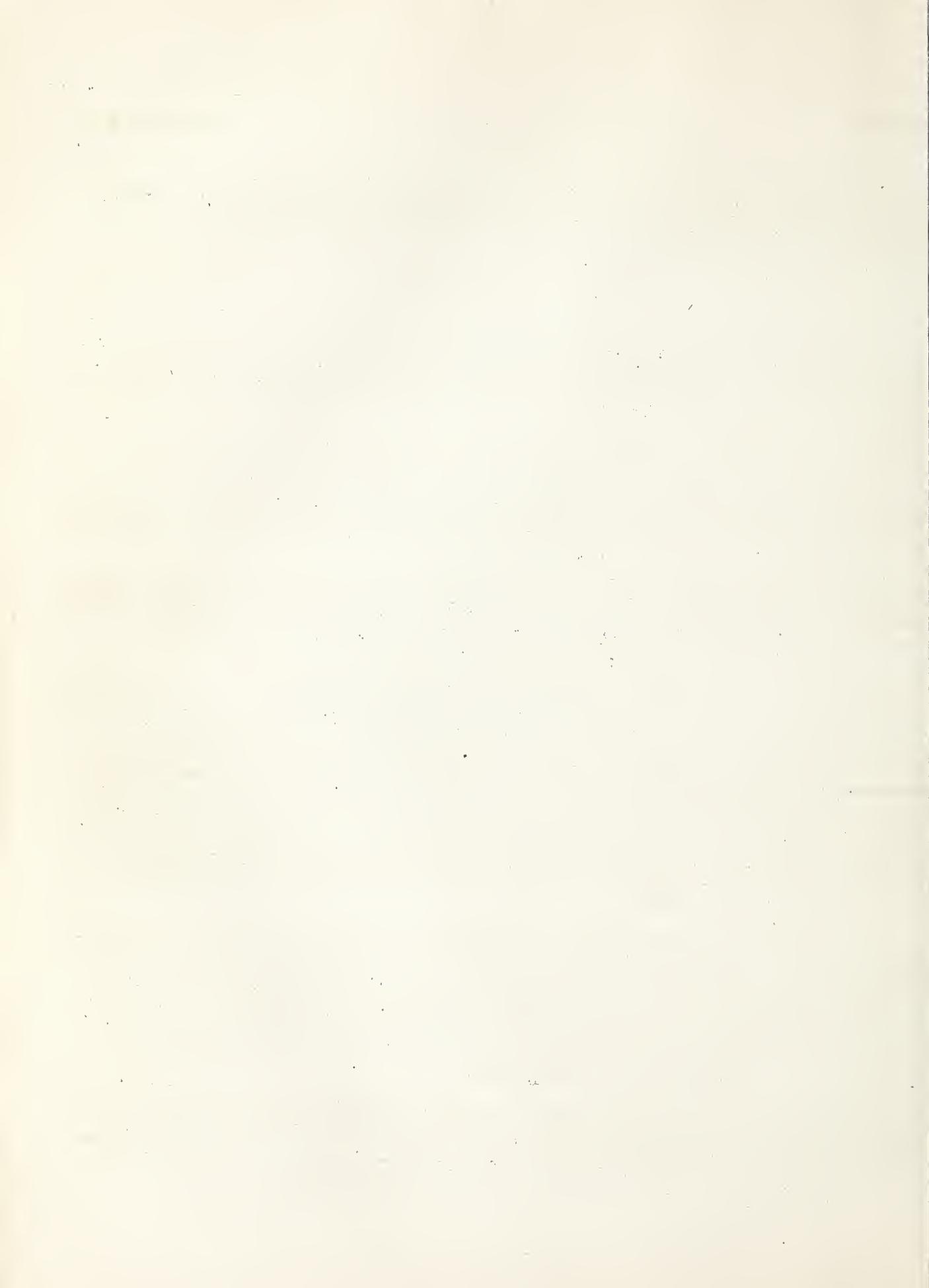
Mr. S. E. Piper was occupied for some time during December in special investigation of poisoning methods applicable to coyotes, ground squirrels, and wood rats in California. He returned to Albuquerque the latter part of the month. During January he will assist Mr. Logan B. Crawford, Predatory Animal Inspector of Colorado, in organizing an extended coyote poisoning campaign.

Mr. Stanley P. Young, who has been assistant inspector in Arizona and has had remarkable success in organizing and conducting poisoning campaigns in that State and in securing the enthusiastic cooperation of stockmen, has also been detailed to Colorado to take part in the poisoning drive against coyotes.

Mr. Alwin E. Gray, who for some years has been connected with the Rodent Control Division of the California State Department of Agriculture, has been appointed biological assistant to take charge of rodent work in Texas. A conference has recently been held by a large number of associations in Texas interested in organizing a State-wide campaign against rats, and the Bureau has been appealed to to detail a representative to take the leadership in this work. In view of this situation and of the importance of operations against prairie dogs and pocket gophers in the State, Mr. Gray will have a very full schedule of important work ahead when he assumes his new duties. He spent the first few days of January in Arizona in order to gain familiarity with the excellent plans for cooperative work which have been developed by Mr. Gilchrist in that State.

Mr. R. Scott Zimmerman has recently conducted a lively campaign against rats at Fargo, N. Dak., where the infestation proved to be very heavy. He enlisted the cooperation of the City Commission, the Commercial Club, the Health Department, the boy scouts, various women's clubs, and other organizations of the city, and these took a very prominent and active part in staging the very successful campaign. Barium carbonate was purchased in quantity and used as the poisoning agent along with other means of repression and destruction.

At Blackstone, Va., the home demonstration agent appealed to the Bureau for advice regarding the organization of a campaign against rats. As the work progressed it was estimated that probably 12,000 of the pests would be killed in the town. Later developments showed that 30,000 rat tails had been produced.



Mr. Albert M. Day, in charge of rodent work in the Wyoming-Nebraska District, writes as follows regarding the development of rat work in Nebraska:

"Mr. Perry conducted several rat extermination demonstrations near Kearney, Buffalo County, last fall and Mr. Ludden, the County Agent, announced in the Conference that it was the most popular piece of work of any kind that had ever been done in his County. Several other agents expressed a desire that rat work be taken up in their counties next spring."

Dr. Karl B. Hanson, in charge of the experimental fur farm at Keeseville, N. Y., was detailed to attend the fox show at Muskegon, Mich., December 8-10, and addressed the fox breeders in attendance. He reports a very interesting exhibition of silver foxes, and that he availed himself of the opportunity to gain much interesting information through visiting the many fox farms in the vicinity of Muskegon and conferring with those in attendance at the exhibition.

Mr. Frank G. Ashbrook, of the Division of Animal Husbandry, Bureau of Animal Industry, is being transferred to the Bureau in connection with the investigation of fur-bearing animals. He will devote himself primarily to the study of housing, feeding, and handling practices and to developing production practices along sound and profitable lines. He will make a thorough survey of methods now employed in the United States and at important centers of fur-bearing animal production in Canadian provinces.

We regret to learn that Mr. Stanley G. Jewett has been suffering since early in December with a combined attack of tonsillitis and quinsy. Favorable progress toward recovery is now reported.

Mr. W. E. Crouch has recently completed a report covering the period from December 1, 1919, to November 30, 1920, to correspond with the period covered by a report from the Extension Service of Idaho. Mr. Crouch has compiled an excellent series of tables and data from reports received from more than 4,000 farmers who replied to inquiries sent out. The vigorous campaign which has been conducted in Idaho during the past few years under his direction is now showing very definite results in the practically complete eradication of ground squirrels from a number of counties and their very marked reduction in many others.

Mr. Ira N. Gabrielson in charge of rodent operations in Oregon, has started issuing a mimeographed monthly news circular to county agents, farm bureaus, and others interested in the progress of the work in the State and in plans made for future activity. The first number is just at hand and contains much information that should be helpful in developing the many phases of rodent eradication work.

Dr. Glen R. Bach reported for duty as predatory animal inspector in Wyoming about the middle of December. He and Mr. Bayer are now actively engaged in organizing poisoning campaigns in spite of drifting snow which has caused them much difficulty in trailing. A considerable number of coyotes and one gray wolf have been picked up in connection with these operations.

Dr. W. B. Bell attended the annual exhibit of the Baltimore Poultry, Pigeon, and Pet-Stock Association, at Baltimore, Md., December 10, and gave an address on the subject, "Possibilities in Rabbit Production." Besides a remarkable exhibit of poultry and pigeons there was also a very fine display of domesticated rabbits, including representatives of all of the more prominent breeds.

Mr. B. B. Richards has secured the cooperation of county commissioners in organizing a poisoning campaign against jack rabbits in Boxelder County, Utah. The commissioners have appropriated \$1,500 for the work.

In addition to the economic loss caused by jack rabbits in Boxelder County, interest in jack-rabbit eradication has been stimulated by the findings of Dr. Francis, of the U. S. Public Health Service, who has been for some time investigating a disease known as deer-fly fever occurring among the people there. He has discovered that jack rabbits are carriers of the organism responsible for the disease and that it is transmitted from rabbits to human beings through the agency of deer flies, which are abundant in that locality. So far as known, the disease appears to be confined to a limited area in Boxelder and adjacent counties, and it is hoped that its spread may be prevented through the active campaigns now being launched for the control of the jack rabbits.

Economic Ornithology.

Mr. W. L. McAtee was appointed Acting Custodian of Hemiptera (with the exception of Coccidae and Aphididae) in the U. S. National Museum on January 1. He will remain in charge of Economic Ornithology, but will devote one day a week to this new work.

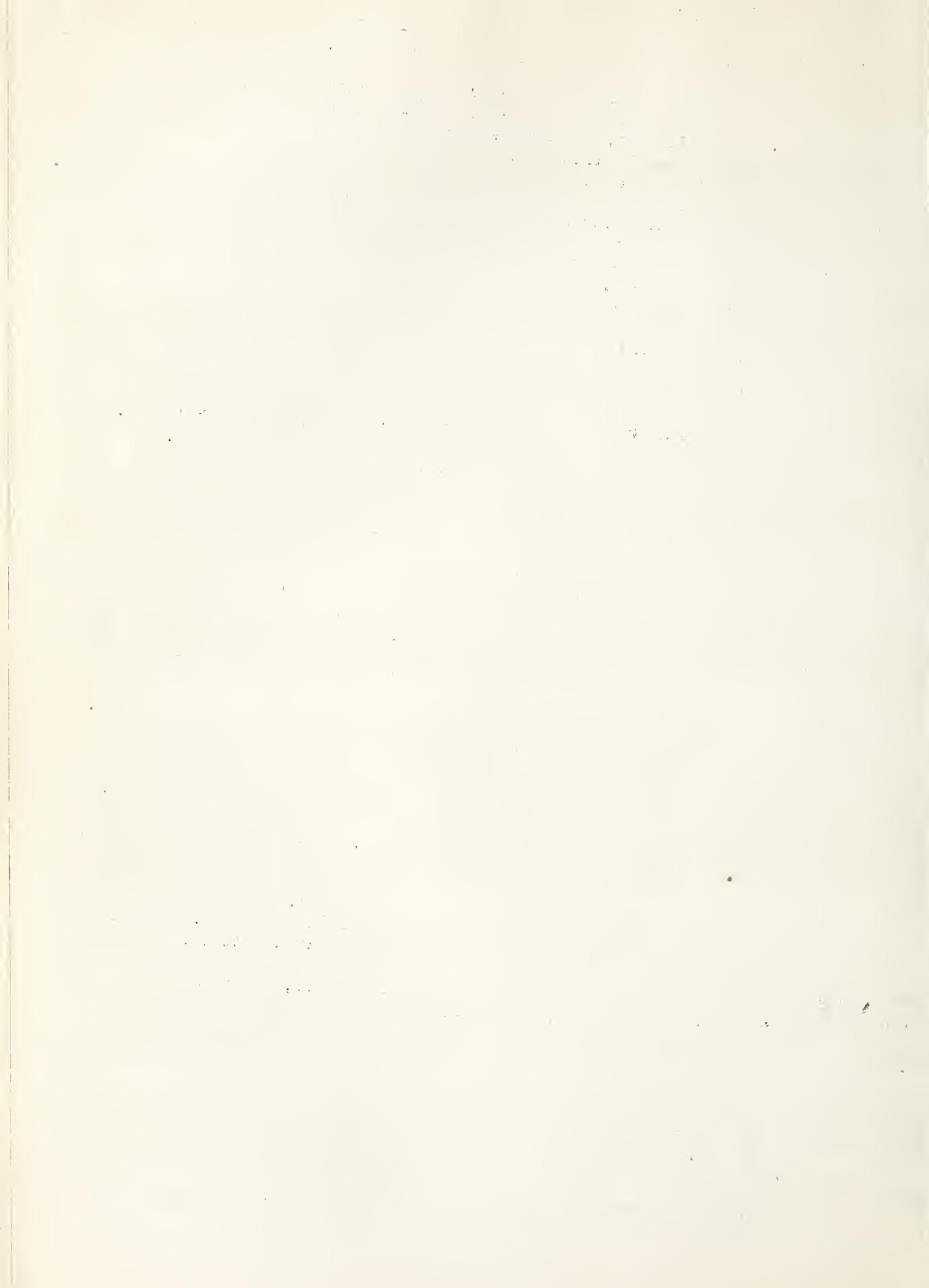
Mr. E. R. Kalmbach has returned to Washington after four months work on the control of crows in Oregon and Oklahoma. The problem of the control of these birds is difficult because of their wariness. Considerable progress was made, however, especially in connection with the development of a "delayed action" bait that would permit a fair proportion of a flock to swallow a fatal dose before those first affected showed symptoms that would frighten the others. At Guthrie, Okla., it was apparent that many crows had been frightened away as the population of a roost there was reduced from 50,000 to about 8,000 through the killing of a comparatively few birds.

MAMMAL AND BIRD RESERVATIONS.

Mr. D. C. Nowlin, in Charge of the Winter Elk Refuge, Jackson, Wyoming, reports that the first elk to come down on the Refuge this season arrived on November 28, driven on by local hunters; and that about 1,000 elk were killed at Jackson Hole before hunting ceased on the first of December. There were 3,500 elk on the Refuge in good condition on December 31.

Warden A. P. Chambers of the Wind Cave Game Preserve, S. Dak., reports that the State has secured two convictions for killing elk near the preserve. In another case a person accused of killing elk was bound over to the circuit court.

A new gasoline boat has been built at Hornersville, Mo., for use in patrol work on the Big Lake Bird Reservation, Arkansas.



MIGRATORY BIRD TREATY AND LACEY ACTS.

Record of Cases Disposed of - Reports Received in December.

Warden	Cases	State	Violation	Fine
Lieber*	1	Indiana	Possessing yellow-legged in close season	\$10 and costs
Pacetti	1	Florida	Killing blue heron	\$10
Walker	10	Arizona	Killing mourning doves in close season	\$10 each
Walker	2	Arizona	Hunting ducks after sunset	\$10 each
Whithead	12	Georgia	Hunting doves in close season	\$15 each

*Commissioner
Department of Conservation

Cases Reported by Wardens and Deputies for Prosecution.

Warden	Cases	State	Violation
Ashmuth and B. E. Smith	5	North Carolina	Hunting after sunset
Ashmuth and B. E. Smith	1	North Carolina	Killing Swan
Antwine*	1	Oklahoma	Shipping recently killed loon
Antwine*	1	Texas	Shipping egret
Antwine*	1	Nebraska	Shipping avocet
Antwine* and Steele	1	Alaska	Shipping swan skin
Barneier	8	Missouri	Hunting ducks from motorboat

Cases Reported by Wardens and Deputies for Prosecution-Continued.

Warden	Cases	State	Violation
Barneier	2	Kansas	Hunting ducks from motorboats
Birsch	1	Virginia	Selling ducks
Birsch	4	North Carolina	Hunting ducks from motorboats and transporting birds out of State without license
Bloxsom	1	Maryland	Hunting with airplane and killing swan
Camp*	2	Texas	Hunting ducks after sunset
Cornell** and Clark**	1	Oregon	Possessing and serving wood ducks to guests
Cushman*	1	Maine	Killing wood duck
Charlton	1	Ohio	Selling and shipping duck eggs
Holmes	1	South Dakota	Possessing and shipping swan
Holmes	1	Nebraska	Shipping swan
Holmes and C. P.S. Smith	3	Missouri	Hunting ducks from motorboat
Holmes and Barneier	5	Missouri	Hunting ducks from motorboat
Hilliard and Farnham	2	New Jersey	Hunting ducks after sunset
Hilliard, Farnham and Pierce*	3	New Jersey	Hunting ducks after sunset
Ingouf*	3	Louisiana	Killing ducks in close season
Ireland	3	Michigan	Killing insectivorous birds
Maple*	1	Illinois	Possessing robins
Miller*	2	Virginia	Hunting ducks after sunset
Mushbach	1	Wyoming	Possessing loon
Pacetti	1	Florida	Killing blue heron
Pierce	5	New Jersey	Hunting ducks after sunset
Perry	1	Mississippi	Killing wood duck

Cases Reported by Wardens and Deputies for Prosecution--Continued.

Warden	Cases	State	Violation
Perry	3	Mississippi	Killing Doves in close season
Perry and Linebaugh	3	Mississippi	Selling ducks
Ransom	3	Washington	Hunting ducks after sunset
Shaver	1	Minnesota	Possessing grebe
Shaver	1	Minnesota	Selling ducks
Shupee	4	Texas	Selling Ducks
Shupee	1	Texas	Possessing meadowlarks
Smith, B. E.	1	New Hampshire	Shipping an eagle in violation of State law
Stadlbmeir	1	New York	Possessing song and insectivorous birds
Visart	2	Oklahoma	Possessing loon
Visart	2	Arkansas	Possessing insectivorous birds
Walker	2	Arizona	Hunting ducks after sunset
Whitehead	1	Georgia	Offering aigrettes for sale
Whitehead	3	Florida	Hunting ducks from motorboat
Whitehead	2	Florida	Killing geese from airplane
Yerger*	3	Mississippi	Killing doves in close season

*U. S. deputy game warden

**State deputy game warden



The following appointments have been made to the position of U. S. Deputy Game Warden:

Chas I. Kimmel, 143 N. Welden Ave., ^SManfield, Ohio.
Geo. W. Schwager, 1710 Garden St., San Antonio, Tex.
John F. Wallace, 22 Deborah St., Providence, R. I.
William A. Connor, Cenimicut, R. I.
Marshall H. Salisbury, N. Scituate, R. I.
Charles E. Collins, Allendale, R. I.
Louis H. Knex, Warwick, R. I.
John D. Young, Phenix, R. I.
James J. Moorehead, Phenix, R. I.
Albertus S. Cook, R. D. No. 1, Woonsocket, R. I.
Alonzo E. Burghuff, 802 Nelson St., Portland, Ore.
John H. Harrell, St. Marks, Fla.
Charles Daniel, R. D. No. 3, Dearborn, Mich.
Lawrence Mott, Les Juneaux, Avalon, Santa Catalina Island, Calif.
Harry G. Higbee, Moose Hill Road, Saugon, Mass.
James A. Peck, 15 North Beacon St., Allston, Mass.
Raymond J. Kenney, 1 West View St., Lowell, Mass.



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GENERAL NOTES

Dr. Harold C. Bryant, Inspector of Birds and Mammals at the port of San Francisco, Calif., visited Washington in January in company with Dr. Loye Holmes Miller. Dr. Bryant and Dr. Miller spent last summer in the Yosemite National Park in extension work in cooperation with the National Park Service and have recently been giving a series of lectures in eastern cities in regard to their work. They spoke before the Biological Society of Washington on January 22 and before the Audubon Society on January 26.

The following publication was issued in January:

Department Bulletin 868, "Economic Value of the Starling in the United States," by E. R. Kalmbach and I. N. Gabrielson, Assistant Biologists; pp. 66, pls. 4 (including one in color), figs. 3; issued January 10, 1921. The colored frontispiece is reproduced from the original drawing by Mr. Kalmbach, exhibited at the Corcoran Gallery of Art in December.

The total number of employees on the rolls of the Bureau on January 31 was 759, of whom 91 are employed in Washington. Of the whole number, 215 are under regular appointment, 9 are inspectors of imports of foreign birds, employed from time to time, 325 are deputy game and fur wardens, and approximately 200 are predatory-animal hunters.

Mrs. Amelia R. Ealy has been appointed to a clerical position in the Accounts Section, by transfer from the Bureau of Animal Industry. She will fill the position made vacant by the resignation on January 15 of Mrs. Vida E. Muse.

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BIOLOGICAL INVESTIGATIONS.

Dr. Alexander Wetmore, who, since late June has been engaged in investigating migratory birds in Argentina and adjoining South American countries, reports having secured valuable information concerning North American breeding birds which pass the winter season in that region. Dr. Wetmore spent most of the early part of his stay in northern Argentina, crossing for a short time into Paraguay, and later going to southern Argentina. A shipment of specimens, comprising collections made up to the middle of the autumn, and including a number of species of considerable interest, has recently been received from him.

Field work in Washington and Arizona has been progressing during the past month along the same lines followed previously.

Mrs. Lillian M. Parkhill, of New York, was appointed a clerk in the office of Biological Investigations on January 25.

ECONOMIC INVESTIGATIONS.

Mr. J. S. Ligon, after completing a very successful piece of work in Michigan, reported at the Washington office on January 12. He will be engaged for sometime completing reports on special lines of work which he has undertaken and in preparing material which the Bureau hopes to publish in the near future relative to procedure in predatory animal work.

Mr. S. E. Piper has had a busy schedule of conferences with State officials during the past months in Wyoming and Colorado with reference to cooperation with the Bureau, and the appropriating of funds for this purpose. He has also had time to render considerable assistance in planning field operations and in consultation with those immediately in charge of the same.

Mr. S. P. Young, formerly assistant predatory animal inspector in the Arizona district, has been transferred to the State of Colorado, where he will assist Mr. Crawford in the organization and conduct of work in that State.

Representatives of the office were in attendance at part of the meetings held in connection with the conference of Extension Directors called from the 48 States by the Secretary of Agriculture. This conference afforded opportunity to meet with a large number of the Extension Directors from localities where organized work against rodents and predatory animals is in progress. The favorable attitude of all these officials toward the work now conducted by the Bureau in cooperation with them was a source of much gratification.

Messrs. D. A. Gilchrist, Charles F. Bliss, and C. R. Landon attended the meeting of the American National Live Stock Association, January 12 to 14, at El Paso, Texas. They report a very successful and interesting gathering of the stockmen and it is evident that they accomplished much in the interests of their respective lines of work.

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mi amiga se ha quedado
en casa de su mamá y papá
dijo que iba a visitarlos
mi mejor amigo que
cada vez se vuelve más
negativo y que
es que él es un chico
que tiene la mejor

Publications Received in August

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（三）在於社會上，我們應當有著一個正確的態度，就是：我們應當在社會上，發揮我們的社會主義的知識，並且在社會上，發揮我們的社會主義的行動。

Messrs. E. R. Sans and George E. Holman attended the annual convention of the Utah Wool Growers Association at Salt Lake, January 17 to 19. They report a lively and interesting gathering and that resolutions highly favorable to the cooperative work of the Bureau with the States were passed. This meeting also afforded an excellent opportunity for helpful contact with the sheep growers of the West, and those who are acquainted with the Bureau representatives at this meeting are sure that no effort was spared in getting the work of the Bureau before the stockmen in a favorable light.

Weather conditions have apparently continued unfavorable during the month for jack-rabbit poisoning operations. Elaborate plans had been laid in a number of the States for staging poisoning campaigns, and despite the handicap due to the unfavorable weather a number of important kills of jack rabbits have been reported.

Reports from many States show that bills have been presented in the State legislatures providing for cooperation with the Bureau in the predatory-animal and rodent work, including several States which previously had furnished no cooperation. The evident benefits derived from the good work which has been accomplished has led the people to make insistent demands upon their legislators to provide funds for increasing the scope of these activities.

Mr. George H. Browne, who was employed sometime ago in the rodent work in Texas, has recently been appointed biological assistant and detailed to the Utah district to assist in the predatory animal and rodent work.

Economic Ornithology.

The number of bird stomachs in the collections of Economic Ornithology at the end of January was 160,167. Of these 83,754 have been examined. During 1920 a smaller number than usual was received, a few less than 4,000, while on the other hand more were examined than in any other year. These totaled 6,361 and consisted mainly of ducks, shorebirds, and birds of prey. For the past few years many contributions have been received from collectors who hold federal collecting permits, with the result that the collection is growing through the addition of material from many widely scattered localities. Noteworthy among the accessions are the collections of Messrs. Francis Harper and J. A. Loring, from Lake Athabasca; H. L. Ferguson (birds of prey), from Fisher's Island, N.Y.; C. C. Sperry, from Massachusetts; C. W. Lester, from New Jersey; C. F. Hedges, from Montana; and A. H. Howell and C. H. Barrett, from Florida. Several hundred stomachs, not included in the figures given above, have been received recently from Dr. Wetmore, from Argentina.

During the last week of January Dr. Fisher made a visit to the duck marshes at Sand Bridge, Virginia. On account of westerly wind and temperate weather there were no large flights of waterfowl. In the morning the birds left the marshes soon after sunrise to settle down on the ocean and did not often return much before sundown. Thousands of geese in high-flying flocks were seen. Among the common ducks were the black duck, mallard,

canvas-back, and redhead. There were also observed green-winged teals, goldeneyes, lesser scaups, pintails, hooded mergansers, and gadwalls.

On North Bay, which borders the southern edge of the property, point shooting was impossible on account of the presence of sink boxes and the accompanying motor boats. These motor boats disturbed all the incoming birds so that they in a short time left the marsh not to return. A few jack-snipe were seen in the marsh and a flock of sanderlings on the beach. The myrtle warble was very abundant and a few individuals of brown thrashers, chewinks, and swamp sparrows were seen.

It is with regret that the death is announced of Mrs. H. L. Viereck, on January 5.

MAMMAL AND BIRD RESERVATIONS.

Major H. F. Stone, in Charge of Reservations, attended the National Conference on Parks at Des Moines, Iowa, January 10-12, and is now in Salt Lake City, Utah, on official business.

A census of game animals on the Wind Cave Game Preserve, sent in by Warden Chambers, on December 31, 1920, shows 61 buffalo, approximately 118 elk, 20 antelope, and 2 black-tailed deer on the Preserve. He reports that the antelope have never looked better.

MIGRATORY BIRD TREATY AND LACEY ACTS.

A conference of U. S. Game Wardens covering districts in the eastern and Mississippi Valley divisions was held in Washington on January 6 and 7, presided over by Chief Warden Lawyer. Matters of interest to the administrative officials of the Bureau and the wardens were discussed. On the opening day the wardens were briefly addressed by Dr. Nelson, the Chief's address pertaining particularly to the desirability of securing cooperation from associations and individuals throughout the country with a view to obtaining a more efficient enforcement of the Federal law. Wardens in attendance at the conference included B. E. Smith, Portland, Me.; Albert Stadlmeir, East Providence, R.I.; P. S. Farnham, Owego, N.Y.; P. K. Hilliard, Atlantic City, N.J.; Thos. T. Bloxson, Locustville, Va.; Wm. L. Birsch, Norfolk, Va.; B. J. Pacetti, Ponce Park, Fla.; E. B. Whitehead, Tallahassee, Fla.; Wm. H. Hoffman, Mobile, Ala.; Geo. C. Shupee, San Antonio, Texas; John E. Perry, Memphis, Tenn.; Harry Barmeier, St. Louis, Mo.; John Q. Holmes, Orleans, Nebr.; J. V. Kelsey, Watertown, S. Dak.; Chas. P. S. Smith, Davenport, Iowa; B. J. Shaver, St. Paul, Minn.; C. F. Asmuth, Milwaukee, Wis.; B. G. Merrill, Hinsdale, Ill.; and M. A. Charlton, Columbus, Ohio. A banquet was held at the Raleigh Hotel on the evening of January 6 which was attended by a number of officials of the Bureau, including the Chief and Assistant Chief, and by most of the members of the Migratory Bird Treaty Act Division.

Chief Warden Lawyer was one of the speakers at the Seventh National Game Conference held under the auspices of the American Game Protective Association, New York City, January 24 and 25. The subject of his address was "Problems in the Administration of the Federal Game Laws." He reports that the meeting was one of the most interesting and enthusiastic ever held.

1. *Leucosia* *leucostoma* *var.* *leucostoma* (L.)
2. *Leucosia* *leucostoma* *var.* *leucostoma* (L.)
3. *Leucosia* *leucostoma* *var.* *leucostoma* (L.)
4. *Leucosia* *leucostoma* *var.* *leucostoma* (L.)

February, 1921.

Mr. Talbott Denmead, of Baltimore, Md., was appointed Deputy Chief U. S. Game Warden, on January 3, for service in the Washington office. Mr. Denmead was Chief Deputy Warden of the Maryland Conservation Commission for several years.

Chief Warden Lawyer represented the Bureau at the annual convention of the New York Conservation Association held in Buffalo on January 14, where he addressed the members. He reports a very enthusiastic gathering of State and local sportsmen.

A meeting of the Advisory Board, Migratory Bird Treaty Act, was held in this city on January 27. The meeting was called by the Chairman, Mr. John B. Burnham, (President, American Game Protective Association) New York City, for the purpose of considering certain changes in the migratory bird treaty act regulations, recommended by this Bureau. The duty of this Board is to advise the Secretary of Agriculture of the Board's views concerning suggested changes in the regulations. The Advisory Board, being made up of conservationists and representative sportsmen from various sections of the country, is in a position to state with a considerable degree of accuracy the attitude and desire of sportsmen and others in the various States. The following members were present: John B. Burnham, New York City (Chairman); Wm. C. Adams, Boston, Mass.; Brooke Anderson, Chicago, Ill.; Carlos Avery, St. Paul, Minn.; Alva Clepp, Prett, Kan.; Edward G. Bradford, Jr., Wilmington, Del.; Wm. L. Finley, Portland, Ore.; E. H. Forbush, Boston, Mass.; Geo. Bird Grinnell, New York City; Marshall McLean, Albany, N.Y.; I. S. Myers, Akron, Ohio; Clinton M. Odell, Minneapolis, Minn.; T. Gilbert Pearson, New York City; George Shiras, 3rd., Marquette, Mich.; and John H. Wallace, Montgomery, Ala.

The following appointments have been made to the position of U. S. Deputy Game Warden since January 1:

Bert Lance, 328 Pine St., Fremont, Ohio.
Walton T. Conover, 812 Washington St., Pekin, Ill.
Lloyd D. Mitchell, Watson St., Ripon, Wis.
John Egan, 1406 Clark St., Manitowoc, Wis.
Anthony Ffarr, 213 S. Main St., Marysville, Ohio.
Harry N. Brittan, Storyford, Calif.

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Record of Cases Disposed of - Reports Received in January.

Warden	Cases	State	Violation	Fine
Bloxson	1	Maryland	Killing two swans and hunting from airplane	\$10.
Dunning*	1	New York	Killing heron	\$1.
Farnham	1	New York	Killing insectivorous birds	\$25.
Holland*	5	Missouri	Killing ducks in close season	\$10. each
Ingouf*	3	Louisiana	Killing ducks in close season	\$50. each.
Linebaugh and Perry	3	Mississippi	Selling wild ducks	\$25. each.
Mecarta*	1	Massachusetts	Killing sandpipers	\$10. each
Mushbach	1	Dist. Columbia	Possessing flicker	\$10.
Pacetti	1	Florida	Hunting from motorboat	\$10.
Ransom	2	Washington	Possessing ducks in storage during close season	\$10. each.
Seaman*	1	Massachusetts	Killing sandpipers	\$1.
Shupee	2	Texas	Hunting after sunset	\$10. each
Smith, B.E.	1	Maine	Killing ducks in close season	\$10.
Smith, B.E.	1	Maine	Killing wood duck	\$15.
Smith, C.P.S.	1	Illinois	Killing bittern	\$50.
Steele*	6	Massachusetts	Hunting from sailboat	\$1. each
Walker	2	Arizona	Hunting after sunset	\$10. each.

*Deputy.

Cases Reported by Wardens for Prosecution.

Warden	Cases	State	Violation
Bumpier	1	Missouri	Hunting ducks from motorboat
Beckwith*	1	Iowa	Possessing and shipping heron
Blockson	2	Maryland	Purchasing ducks:
Britton and Carpenter*	2	California	Killing ducks during close season
Clark*	2	California	Possessing ducks during close season
Ehlers*	1	Indiana	Possessing duck in close season
Hoffman	2	Louisiana	Purchasing ducks
Hoffman	8	Louisiana	Killing ducks
MacGary*	3	Indiana	Killing insectivorous birds
MacGary*	1	Illinois	Killing grebe
Neale*	1	California	Selling ducks
Pacetti	1	Florida	Hunting from motorboat
Riddick*	1	Arkansas	Selling ducks
Shaver	1	Minnesota	Killing gull
Shaver	3	Minnesota	Hunting after sunset
Shupee	3	Texas	Selling ducks
Shupee	2	Texas	Hunting after sunset
Shupee	4	Texas	Killing rails in close season
Shupee	1	Texas	Killing American bittern
Smith, C.P.S.	2	Iowa	Possessing swan
Smith, C.P.S.	4	Missouri	Hunting ducks from motorboat
Taylor*	1	New Jersey	Possessing wood duck
Tonkin	3	Oregon	Hunting after sunset
Vanselow*	1	Illinois	Possessing robin
Yerger*	2	Tennessee	Possessing insectivorous birds

Importation of Foreign Birds and Animals.

The low values placed on certain cage birds is well illustrated by recent shipments received at San Francisco. Among the birds which arrived during the quarter ending December 31, 1920, were consignments appraised as follows: 205 strawberry finches at 2 cents each, 156 sociable finches at 3 cents, 400 strawberry finches at 8 cents, 130 chestnut finches at 10 cents, and 203 canaries at 10 cents. These figures represent the appraised values at port of shipment and not at San Francisco, but, as birds are admitted free there is no inducement for understating values. Comparison of these prices with those charged by retail dealers shows a wide margin of profit even after the birds reach the port of entry.

ALASKA DIVISION.

Mr. Milton S. Clark, of San Francisco, Calif., and Mr. Stanley H. Craig, of Tacoma, Wash., have been appointed deputy fur wardens for enforcing the regulations relating to unlawful shipments of skins of land fur-bearing animals from Alaska arriving at these ports.

Mr. Eddie Berkeley, of Wrangell, Alaska, has been appointed deputy fur warden for that section of southeastern Alaska, working under the immediate supervision of Chief Fur Warden Bailey, of Juneau.

This Division is now preparing a table of statistics showing the number, kinds, and value of skins of land fur-bearing animals shipped out of Alaska from November 16, 1919, to December 31, 1920.

A number of very interesting and valuable reports have been received from the Bureau's experts stationed at the reindeer experimental station at Unalakleet, relating to diseases of reindeer, and grazing problems. The subject of reindeer meat has been given considerable attention by the public press the past month, with the result that many thousands of pounds of this meat will probably find its way to tables of our citizens in the States during the coming summer.

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Monthly News Bulletin of the Bureau of Biological Survey
United States Department of Agriculture

Vol. 2,

Washington, D. C., March, 1921

No. 3.

THE SURVEY is issued for office and field men of the Biological Survey under authorization of the Chief of Bureau as a medium for furnishing information regarding the work of the Bureau, movements of the staff, changes in assignments, and news and personal items of importance, with a view to increasing the interest of the personnel in the work of the Bureau as a whole and in each one's individual work as related to it. It is intended primarily for employees and is not in any sense a publication.

GENERAL NOTES

The Biological Survey was represented by Dr. Nelson and a number of the Bureau staff at a buffet supper tendered the retiring Secretary, Hon. F. T. Meredith, at the Raleigh Hotel on the evening of February 16, by the scientific and technical men of the Department. The feature of the occasion was the speech of the Secretary, in accepting a bound volume containing an appreciation, signed by all who attended. Messrs. E. A. Goldman, H. C. Oberholser, and F. C. Lincoln represented the Biological Survey on the committee on arrangements.

The Agricultural appropriation bill for the fiscal year 1922, which passed both Houses of Congress during the last days of the session and was approved by the President on March 2, provides for this Bureau an increase of funds over last year of \$37,440. The amounts are in most cases the same as for last year, increases being in the following items: Statutory salaries, \$13,620, covering positions formerly carried under the lump sums of the various projects; economic investigations, \$21,200; maintenance of reservations, for Sullivans Hill Park buildings, \$2,500; reindeer and land fur-bearing animals in Alaska, \$6,500. The total amount provided for the Bureau in the new bill is \$823,305.

The address of Dr. Nelson on "The Big Game of Alaska," at the annual meeting of the American Game Protective Association, in New York City, on January 25, 1921, will be published with illustrations in a forthcoming issue of the Bulletin of the Association. The object of the article, which, considering the importance of the subject, covers the whole field in a brief but comprehensive manner, is to convey a more definite idea of the abundance of Alaska's big game and of the game situation generally in that Territory than is now available in any one publication.

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The following paragraph is quoted from THE SURVEY of February, 1920:

"Employees of the Biological Survey frequently read items in daily or weekly newspapers relating to wild life or the work of the Biological Survey that would not reach press-clipping services. Such items may be useful to the Bureau, and with a little cooperation they may be made promptly available. To this end it is suggested that when such notices come to the attention of members of the staff, either in Washington or in the field, they be clipped and mailed to the Bureau. They may be either attached to a slip of paper on which may be written the name of the paper from which clipped, the date, and the name of the person clipping it, or this information may be written on the margin of the clipping. If pasted to a piece of paper, the pasting should be done a little above the item in order that the whole item may be removed unmutilated if found to be of permanent value."

The response on the part of employees has been very gratifying and as a result much valuable information has reached our files. It is now planned to widen the scope of the service to have it include clippings on the work of the Department as a whole, and requests to this effect (for clippings - not for complete newspapers) are being sent through the various Bureaus to all employees of the Department. The added cooperation desired of employees of the Biological Survey is anticipated, and it is believed that they will be among the foremost in this new line of service for the Department of Agriculture.

Among the manuscripts submitted in February for outside publication were the following:

Gabrielson, Ira N., "An Addition to the Oregon List of Birds," for The Condor; "A Question Concerning the Cowbird," for The Auk; "Notes on the Mammals Observed in Marshall County, Iowa," for the Proceedings of the Iowa Academy of Science; "Short Notes on the Life Histories of Various Species of Birds," for the Wilson Bulletin; "The Douglas Ground Squirrel," "The Oregon Ground Squirrel," "The Piute and Townsend Ground Squirrels," and "The Columbian Ground Squirrel," for The Oregon Farmer.

Goldman, E. A., "What Health Officers Can Do to Promote Rat Extermination," for the American Journal of Public Health.

Jackson, H. H. T., "A Recent Migration of the Gray Squirrel in Wisconsin," "Wolverene in Itasca County, Minnesota," "An Inquisitive Porcupine," "The Brown Bat Active in Winter at Washington, D. C.," "Some Habits of the Prairie Mole, Scalopus aquaticus macrourus," "A Mongoose in Kentucky," "Two Unrecognized Shrews from California," and "A Hybrid Deer of the F2 Generation," for the Journal of Mammalogy.

Lincoln, Frederick C., "The History and Purposes of Bird Banding," for The Auk.

Jewett, Stanley G., "Additional Notes on the Water and Shore Birds of Netarts Bay," for The Condor.

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Mr. Joseph D. Demit, who has served in the Section of Accounts for more than two years, and prior to that time in the File Room, has been transferred to an accounting position in the Bureau of Public Roads, effective March 1. The resulting vacancy will be filled by the transfer from the War Department of Mr. Guy W. Lane.

BIOLOGICAL INVESTIGATIONS

Letters recently received from Dr. Alexander Wetmore, dated at Montevideo, Uruguay, in late January, announce his intention to spend most of February in that region and then to return to Argentina. He reports generally good success.

Mr. G. G. Cantwell is continuing field work in Washington, points worked by him during February including Sequim, in the Olympic region; and Westport, on Grays Harbor. Other field projects on which work is being continued are by Dr. W. P. Taylor, on the fauna of Washington, at his headquarters at La Jolla, Calif.; and by Mr. Vernon Bailey, on the life histories of various species of harmful rodents in Arizona, at his headquarters at Continental, Ariz.

ECONOMIC INVESTIGATIONS

Mr. Frank G. Ashbrook, who entered the service of the Bureau by transfer from the Division of Animal Husbandry, Bureau of Animal Industry, on February 1, will be primarily concerned with investigations relative to production of fur-bearing animals in domestication, conditions of fur-bearing animals in a wild state, and with the commercial handling of furs. In connection with the last-named feature of his work he attended the winter auction sale of the International Fur Exchange, at St. Louis, Mo., where the pelts of predatory animals taken by Government hunters were included. He reports that while fur prices ran from 10 to 30 per cent lower than last May on most of the furs sold, the market was somewhat stronger than in the recent auction sales held in New York. The fur market is still in an unsettled state but a tone of optimism obtained among buyers and it is believed that it will be stabilized within a reasonable time. While in attendance at the sale, Mr. Ashbrook checked up the manner in which the furs submitted for sale by the predatory animal inspectors were being handled, and obtained information of much value.

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Mr. Charles F. Bliss, called from the New Mexico District for consultation, reached Washington the afternoon of February 28 and is now busily occupied in the Washington office.

Mr. A. E. Gray arrived in Texas the latter part of January in time to attend important conferences of State officials and State organizations relative to the organization of rat-eradication campaigns. The rat work is a very live issue in that State and Mr. Gray has been kept busy developing plans to coordinate the work of the many interested organizations. The people of Texas have appealed to the Bureau for leadership in this work, and prospects now indicate that a very important service will be developed in controlling rats and other injurious rodents.

The Agricultural appropriation bill gives this Division about \$30,000 more than last year in the lump and statutory funds. Many measures are now pending before State legislatures to provide funds for cooperation with the Bureau in the predatory-animal and rodent work. Prospects are good for a consistent development of the cooperative work despite the somewhat unfavorable financial conditions prevailing in many of the Western States.

Questions have frequently arisen regarding the soundness of the position taken by the Bureau in Farmers Bulletin 896, pages 19 and 20, relative to the ineffectiveness of various viruses advocated by commercial companies for the destruction of rats. With a view to checking up any possible development in the preparation of viruses, the Bureau recently arranged with the Bureau of Animal Industry to make a number of thorough tests. The report of the bacteriologist indicated that the objections to virus preparations pointed out by the Bureau have not been successfully overcome in the cases of the preparations tested. Investigations are still in progress but the findings thus far fully vindicate the Bureau's position. It is believed that better results will follow the use of poisons and traps as heretofore advocated.

Miss Mary Farmer resigned as stenographer in this Division, effective February 23, to take up work with the Scripps-McRae newspaper syndicate.

Economic Ornithology

The demand for effective bird-control measures in certain localities is increasing. A troublesome case has been reported from the Imperial Valley, southern California, where blackbirds have been doing severe damage to grain crops, particularly milo. Warden E. P. Walker, who has submitted a report of a preliminary investigation of the problem, states that the migratory

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flocks of red-wings and yellow-heads are chiefly to blame. The resident blackbirds do a lesser amount of damage. Most of the injury is inflicted from September to the end of December. Experimental work in the development of control measures for this situation will be one of the activities of the Division during 1921. A continuation of investigations on crow control is also planned.

MAMMAL AND BIRD RESERVATIONS

Major Stone returned to Washington on February 17 from an official trip in the West. On February 28 he went to St. Louis, Mo., to attend the meeting of the Missouri Fish and Game League to be held in that city on March 4, in connection with an attempt being made by sportsmen to secure better fish and game laws for Missouri at the present session of the legislature. Before returning to Washington he will make a tour of inspection of the bird reservations located on the Gulf of Mexico and on the east and the west coasts of Florida.

Mr. D. C. Nowlin, in charge of the Winter Elk Refuge, reports that the elk are in good condition and that feeding did not begin until January 27.

Warden Hodges, of the National Bison Range, reports that the antelope on the Range now number 45, all in good, healthy condition.

MIGRATORY BIRD TREATY AND LACEY ACTS

Chief Warden Lawyer left on February 3 for an extended trip in the South and West to confer with members of the field force, State game officials sportsmen, and others relative to important matters connected with the enforcement of the Federal game laws. He is expected to return about April 5.

Federal Judge Bodine of the District of New Jersey recently imposed a jail sentence of 10 days and in addition assessed a fine of \$200 for a violation of the Migratory-bird Treaty Act and Regulations in February, 1920. The violator had been apprehended by Warden Hilliard for shooting migratory waterfowl after the close of the Federal open season.

A newspaper clipping reaching the Bureau in February announces the marriage of Warden Tonkin to Miss Gertrude Blinn, of Portland, Oregon. The Washington office and the field warden force extend best wishes for a bright and happy future.

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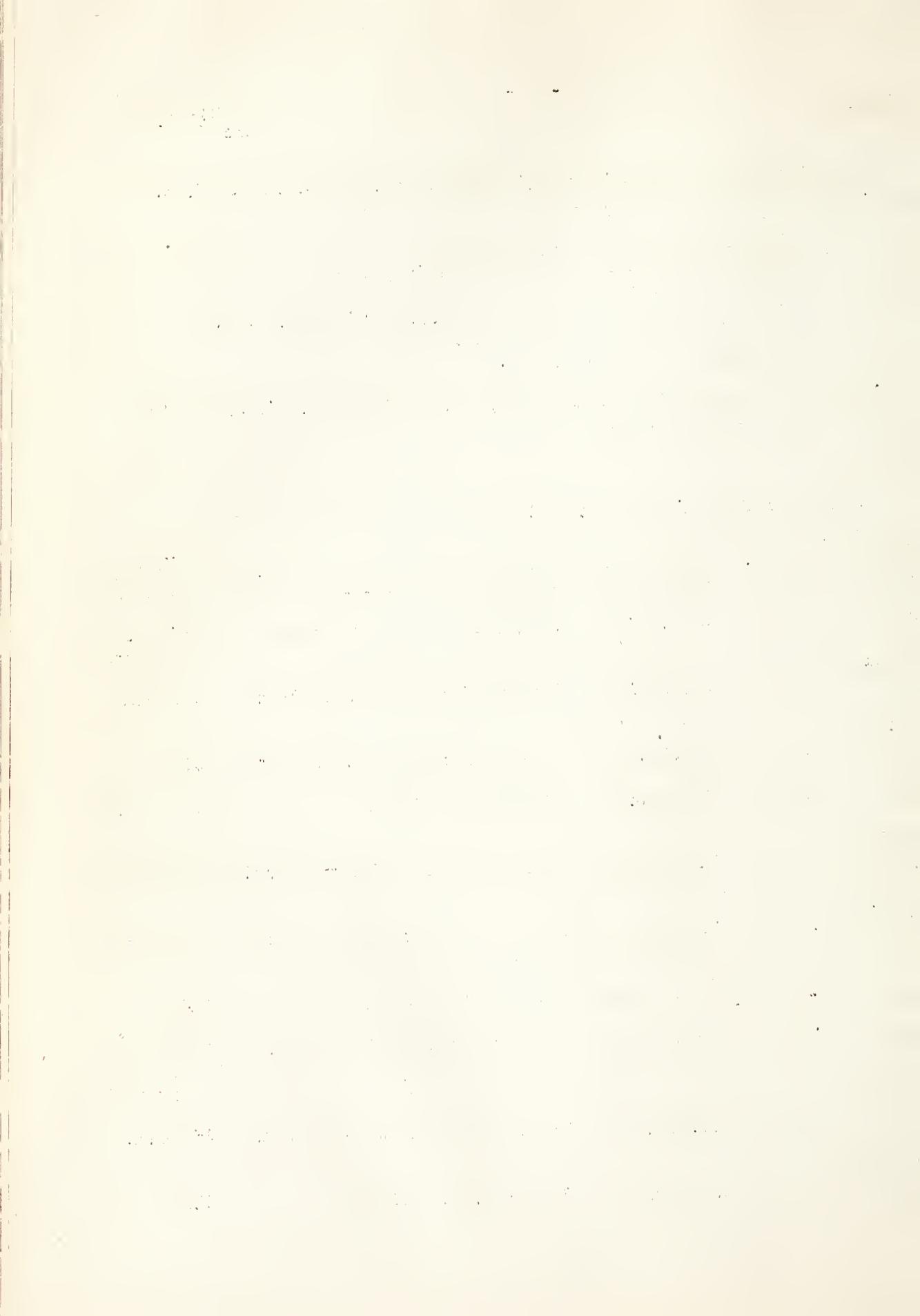
The following appointments have been made to the position of U. S. Deputy Game Warden since February 1:

William A. Keys, Princeton, Wis.
Gasnor F. Tongmire, 129 So. Commerce St., Natchez, Miss.
Earl J. Willis, Riceville, Iowa.
Robert B. Chappell, 111 Huntington St., New London, Conn.
Oliver H. Neimeyer, Prospect, Ohio.
Frank Russell, Park Falls, Wis.

The appointment of Mr. Thomas Quinn, Mullen, Nebr., as U. S. Deputy Game Warden has been terminated.

Record of Cases Disposed of - Reports Received in February.

Warden	Cases	State	Violation	Fine
Barneier	9	Missouri	Hunting ducks from motorboat	\$35 each
Barneier	1	Missouri	Possessing ducks in close season	\$50 and costs
Barneier and Holmes	5	Missouri	Hunting ducks from motorboat	\$25 each
Birsch and Farham	1	Florida	Hunting ducks from motorboat	\$10
Bloxson	2	Virginia	Killing sandpipers	\$10 each
Bloxson and Charlton	1	Louisiana	Killing and shipping wood duck	\$50 and costs
Charlton and Pacetti	2	Florida	Offering migratory birds for sale	\$5 each
Hilliard	1	New Jersey	Killing geese in close season	\$20
Hilliard	1	New Jersey	Killing geese in close season	\$200 and 10 days in jail
Hoffman	12	Alabama	Killing doves in close season	\$5 each
Hoffman and Shaver	1	Alabama	Possessing a robin	\$10



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Record of Cases Disposed of - Reports Received in February. - cont'd

Warden	Cases	State	Violation	Fine
Hoffman and Merrill	1	Alabama	Killing robins	\$10
Hoffman, Merrill, and Oberhaus*	1	Alabama	Possessing meadowlarks	\$10
Hoffman, Merrill, and Oberhaus*	2	Alabama	Killing insectivorous birds	\$10 each
Holmes and C.P.S. Smith	2	Missouri	Hunting ducks from motorboat	\$25 each
Linebaugh	8	Tennessee	Killing doves in close season	\$10 and costs each
Pacetti	1	Florida	Possessing aigrettes and parts of herons	\$1 (previously confined in jail 31 days default of bond)
Pacetti	1	Florida	Killing sandpipers	\$10
Pacetti	1	Florida	Possessing robins	\$10
Smith, C.P.S.	3	Missouri	Hunting from motorboat	\$25 each

Cases Reported by Wardens for Prosecution.

Warden	Cases	State	Violation
Birsch and Farnham	1	Florida	Hunting ducks from motorboat
Bloxson and Charlton	1	Louisiana	Killing and shipping wood duck
Charlton and Pacetti	2	Florida	Offering to sell migratory birds

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Cases Reported by Wardens for Prosecution. cont'd

Warden	Cases	State	Violation
Hoffman, Merrill, and Oberhaus*	1	Alabama	Possessing meadowlarks
"	2	Alabama	Hunting from motorboat
"	3	Alabama	Possessing plover and shrike
"	1	Alabama	Possessing robins and woodpeckers
Hoffman and Shaver	1	Florida	Possessing robin
Hoffman and Merrill	1	Alabama	Killing robins
Linebaugh	1	Kentucky	Possessing ducks in close season
Maple*	1	Illinois	Selling ducks
Merrill	2	Illinois	Transporting ducks in violation State law and Section 4 of Regulations.
Pacetti	1	Florida	Killing sandpipers
Ransom	2	Washington	Possessing ducks in storage
Riddick*	1	Arkansas	Selling ducks
Riddick*	2	Arkansas	Purchasing ducks
Riddick*, Thomas*, and Visart	2	Arkansas	Selling and shipping ducks for sale
Shaver	2	Minnesota	Offering aigrettes for sale
Shaver	2	Wisconsin	Hunting ducks after sunset
Shupee	2	Texas	Killing rail out of season
Shupee	1	Texas	Killing doves out of season
Shupee	3	Texas	Possessing doves in close season

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Cases Reported by Wardens for Prosecution. - cont'd

Warden	Cases	State	Violation
Shupee	4	Texas	Possessing rails in close season
Shupee and Ferry	7	Texas	Hunting ducks after sunset
Steele	1	Washington	Killing ducks in close season from motorboat
Tonkin	1	Idaho	Killing ducks in close season
Visart	5	Arkansas	Selling ducks
Visart	2	Arkansas	Purchasing ducks
Walker	2	California	Hunting ducks after sunset
Whitehead and C.P.S. Smith	1	Florida	Transporting ducks out of State in violation State law and Section 4

* U. S. Deputy Game Warden

Note: Many reports of violations were received from wardens, mention of which will have to be deferred until the next issue of THE SURVEY.

Importation of Foreign Birds and Animals.

An outbreak of quail disease developed at Brownsville, Tex., on February 23, and resulted in the death of about half the birds of one shipment, necessitating the suspension of shipments for some days.

At the hearings before the Ways and Means Committee of the House of Representatives on the new tariff bill, on February 8 and 10, representatives of the Millinery Chamber of Commerce advocated an amendment of the present plumage law which will throw the burden of proof as to the legality of importations on the owner instead of the Government, and thereby render enforcement of the law more effective.

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ALASKA DIVISION

Hearings on the agricultural schedule of the tariff bill, which have recently been published, contain an interesting account of the development of the reindeer industry in Alaska..

Mr. A. M. Bailey, chief fur warden for Alaska and U. S. game warden, has resigned effective March 31, and the Bureau's interests in Alaska, formerly cared for by him will be in charge of Mr. Ernest P. Walker, to be transferred from the migratory-bird work. Mr. Bailey has accepted a curatorship in the Colorado Museum of Natural History, at Denver, and contemplates having charge of an expedition the coming summer to secure material for exhibition groups. He has recently transmitted to the Bureau some excellent reports on the birds of Southeastern Alaska, as well as on the fur and game conditions in that Territory.

New regulations for the protection of game in certain localities in Alaska were promulgated by the Secretary on February 21 effective March 1. The most important changes were those shifting the open season for deer two weeks later so as to begin September 1 instead of August 15 and to continue until November 15; making the moose season in northern Alaska conform with that south of Latitude 62°; and changing the open season on mountain goats to the period from August 20 to October 31.

Mr. L. J. Palmer, assistant in charge of the reindeer experiment station at Unalakleet, has recently made a trip over the Seward Peninsula to secure information on its grazing capacity to carry reindeer herds.

Mr. O. J. Murie, stationed at Fairbanks, has been attending court in connection with cases involving the illegal taking of furs. As soon as these are disposed of he will continue his investigation of the caribou herds.

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Monthly News Bulletin of the Bureau of Biological Survey
United States Department of Agriculture

Vol. 2.

Washington, D. C., April, 1921

No. 4

THE SURVEY is issued for office and field men of the Biological Survey under authorization of the Chief of Bureau as a medium for furnishing information regarding the work of the Bureau, movements of the staff, changes in assignments, and news and personal items of importance, with a view to increasing the interest of the personnel in the work of the Bureau as a whole and in each one's individual work as related to it. It is intended primarily for employees and is not in any sense a publication.

GENERAL NOTES

Secretary Wallace, on March 29, appointed Dr. Nelson, of this Bureau, an alternate member of the Interdepartmental Alaska Board in recognition of his long familiarity with Alaska and Alaskan affairs, including his knowledge of conditions gained during his recent investigations there. In the same connection it is of interest to note that Dr. Nelson has been made an honorary member of the Association of Alaska Pioneers at Nome and St. Michael and of the Alaska Historical Association - his first visit to Alaska covering nearly five years, from 1877 to 1881, a period which long antedates the gold discoveries in the Territory.

On the evening of March 19, Dr. Nelson attended the annual meeting of the Wilderness Club of Philadelphia, an organization of big game hunters, and addressed them on the big game of Alaska. He also spoke on Alaska before the convalescent soldiers at the Walter Reed Hospital, on March 7.

The Bureau will be represented with a booth and small exhibit at the Sportsmen and Tourists Fair, to be held at Spokane, Wash., April 12-15. Game Warden W. H. Ransom will be on hand to assist in explaining the exhibit, which will consist of a cabinet displaying common injurious and beneficial birds and a rack of swinging frames depicting the various activities that have to do with birds, as carried on by the Federal Government, particularly the Biological Survey. In addition, Warden Ransom will be supplied with an abundance of literature dealing with Federal game and bird matters.

The appeal to the cooperation of employees in providing a press-clipping service for the Department is meeting with a very gratifying response and is furnishing for the Bureau and the Department many notes, especially editorials, of value. As individual acknowledgments of clippings are not feasible, this method is taken of expressing the appreciation of the Bureau for the work thus done. Notation should be made on a margin or on a slip attached to each clipping to show the name of the paper clipped, place published, date of issue, and by whom sent to the Bureau.

Regrettably, the author does not seem to have been able to find any information on the authorship of the manuscript. The authorship of the manuscript is, however, of interest, as it is the only known manuscript of the author.

It is not clear whether the author of the manuscript is the same as the author of the book. The author of the book is known to be a member of the Royal Society of Medicine, and the author of the manuscript is known to be a member of the Royal Society of Medicine. The author of the book is known to be a member of the Royal Society of Medicine, and the author of the manuscript is known to be a member of the Royal Society of Medicine.

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Members of the staff interested in the American Society of Mammalogists are busy with plans for the third annual meeting of the society, to be held in Washington, May 2-4, 1921. In addition to plans for the regular sessions devoted to the reading of papers, discussion, and business, arrangements are being made for visits to the various places of zoological interest in the city.

A special exhibit of some of the folio works containing colored plates of birds published by the celebrated English ornithologist, John Gould (1804-1881), was arranged in the Division of Prints of the Library of Congress for the benefit of the Audubon Society of the District of Columbia and the general public on Tuesday evening, March 22. A practically complete set of these magnificent folios, comprising more than 40 volumes and containing about 3,000 plates, is accessible in the libraries of Washington, including that of the Department of Agriculture. Commenting on the scientific interest of the works, Dr. T. S. Palmer, expert in game conservation of this Bureau, pointed out to those viewing the exhibit that Gould did for the birds of the Old World much the same work that John James Audubon did for the birds of North America, and recalled that Gould was one of the few ornithologists who succeeded in amassing a fortune through the publication of works of this kind.

Publications contributed by the Bureau and issued during March were as follows:

Service and Regulatory Announcement, B. S. 38, "Regulations for the Protection of Game in Certain Localities in Alaska"; pp. 3, issued March 1, 1921.

Department Circular 168, "Annual Report of the Governor of Alaska on the Alaska Game Law, 1920"; pp. 16, issued March 16, 1921.

Service and Regulatory Announcement, B. S. 39, "Importation of Quail from Northeastern Mexico"; pp. 2, issued March 29, 1921.

The Department of Agriculture Yearbook for 1920, which will probably be ready for distribution within the next month or two, will contain four articles from the Biological Survey. One by Mr. W. L. McAtee, deals with the relation of birds to agriculture; one by Mr. E. A. Goldman, discusses the general conservation work of the Bureau; and two by Dr. W. B. Bell are on the economic activities of the Bureau relating to mammals - the first dealing with rodent control operations and the second with campaigns against predatory animals.

BIOLOGICAL INVESTIGATIONS

"Birds of the Washington Region" is the title of a pamphlet by Miss May T. Cooke, of this Division, published March 31, 1921, in the Proceedings of the Biological Society of Washington (vol. 34, pp. 1-22). The work is based very largely on the data in the files of the Biological Survey and shows for the territory within a radius of approximately 20 miles from the Capitol 203 species and subspecies of birds. The work will be useful to all local ornithologists.

Mr. Francis Harper resigned as assistant biologist in this Division, effective February 28, 1921.

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ECONOMIC INVESTIGATIONS

Mr. J. S. Ligon, who has been engaged on work in Washington, D. C., during the month, has completed plans to return to Michigan early in April to continue the predatory-animal work in cooperation with the State Game Commission.

Measures providing State funds for cooperation with the Bureau have been enacted this year in Arizona, Montana, Oregon, South Dakota, and Wyoming. In Texas and New Mexico cooperative work is being carried on under previous legislation. Bills providing for cooperation are still pending before a number of State legislatures. Prospects are good for continuance of cooperation with State organizations and indicate that increasingly large funds will be made available for this purpose.

Mr. Frank G. Ashbrook has been engaged in studying fur markets in New York and fur farms in that vicinity and about Boston, Mass. He has already gathered much information regarding conditions in these two regions, and will prosecute the work with a view to making a complete survey of the industry of rearing fur-bearing animals.

Mr. S. E. Piper has had a busy schedule of work in Wyoming, Idaho, Utah, and Colorado during the past month. Exceedingly good reports are being received regarding the results of poisoning campaigns developed as a result of his demonstrations of poisoning methods and procedure.

The headquarters of Mr. Charles J. Bayer, Predatory Animal Inspector of Wyoming, have been transferred from Lander to Cheyenne. Good office space has been provided in the State Capitol Building. This will be favorable for the cooperative work provided for by recent action of the Wyoming Legislature, in which funds are to be expended through the State Game Commission.

Headquarters for Mr. Charles G. Poole and Mr. F. E. Garlough have been provided in the Agricultural Building, Sacramento, Calif. This will bring them into favorable association with officials of the State Department of Agriculture with whom they are cooperating in the predatory-animal and rodent-eradication work, respectively.

Mr. Charles F. Bliss returned to Albuquerque, N. Mex., on March 17, after spending several days in Washington, D. C., in conference with Bureau officials and in developing plans for the work in New Mexico.

Mr. J. Ray Williams was appointed field assistant in Colorado, on March 23, to assist Mr. Keyes.

Mr. John Finley has been appointed field assistant in Idaho, effective March 7, to assist Mr. Crouch.

Mr. Charles McCarthy was appointed clerk to assist Messrs. Goldman and Crouch at Boise, Idaho, on March 21.

Miss Beulah E. Fairley was appointed clerk in the office of Inspector Bateman, at Billings, Mont., on March 9.

April, 1921.

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Economic Ornithology

Mr. Remington Kellogg will be away from Washington until the middle of May engaged in securing material at the Universities of Michigan and Wisconsin with which to continue a study of the food habits of toads. He plans to secure from alcoholic collections of the university museums the stomach contents of the toads now in their possession. This material will be carefully removed from specimens, placed in vials, and subsequently examined in the laboratory in Washington.

MAMMAL AND BIRD RESERVATIONS

Major Stone, in charge of reservations, returned to Washington on April 1 from a trip of inspection of the bird reservations in the Gulf of Mexico and Florida.

Warden Chambers reports the death of one of the buffalo bulls at the Wind Cave Game Preserve.

Mr. D. C. Nowlin, in charge of the Winter Elk Refuge in Jackson Hole, Wyoming, reports that the count of elk in that region made in cooperation with the Forest Service, shows about 9,300 survivors in the southern herd, and 2,000 elk in the Wind River region. Mr. Nowlin also states that the elk are scattering and that feeding was suspended March 18,

Mr. Michael Wagner, U. S. Reclamation Service superintendent at Cody, Wyoming, has been appointed cooperative warden on the Shoshone Bird Reservation.

Mr. Ellis Zachariah, U. S. Reclamation Service ~~watchman~~, has been appointed cooperative warden on the Clear Lake Bird Reservation, California.

MIGRATORY BIRD TREATY AND LACEY ACTS

Chief Warden Lawyer returned to Washington on April 2 after an extended trip which took him through many of the Southern, Middle, Western, and Pacific Coast States, and on which he conferred with members of the field force, State game officials, sportsmen, and others concerning matters connected with the enforcement of the Federal game laws. He addressed sportsmen's meetings in a number of the cities visited, notably at Seattle and Spokane, Wash., Helena, Mont., and Cleveland and Akron, Ohio. Mr. Lawyer found evidence everywhere of the great increase of migratory wild fowl due to protection afforded by the Federal law together with an increasing disposition on the part of persons everywhere to obey the law.

Deputy Chief Warden Denmead represented the Bureau at the third annual convention of the Michigan Sportsmen's Association, held at Lansing, March 3-4. He reports a good attendance and an enthusiastic meeting.



Game Warden E. P. Walker was transferred on March 1 from Arizona to Juneau, Alaska, where he will look after the interests of the Bureau formerly cared for by Mr. A. M. Badley.

Apprehended for shooting four pintail ducks out of season, a Missouri hunter on March 7, 1921, was fined \$200 and costs by Federal Judge Van Valkenburg, sitting at St. Joseph, Mo. Such fines help immensely and have a salutary effect.

Record of Cases Disposed of - Reports Received in March.

Warden	Cases	State	Violation	Fine
Asmuth and Boomer*	1	Illinois	Killing ducks in close season	\$50 and costs of \$35.33
Barmeier	1	Missouri	Killing ducks in close season	\$200 and costs
Barmeier	4	Missouri	Hunting ducks from motorboat	\$5 each
Bloxson	2	Maryland	Purchasing ducks	\$5 each
Clark*	1	California	Selling ducks	\$25
Hoffman	4	Alabama	Killing robins	\$10 each
Hoffman	1	Alabama	Killing robins	\$5
Knights and Charlton	1	Georgia	Selling ducks	\$25
Pacetti	8	Florida	Killing doves in close season	\$1 each
Pacetti	3	Florida	Killing snipe in close season	\$1 each
Pacetti	1	Florida	Killing wood duck	\$1

Record of Cases Disposed of - Reports Received in March, - cont'd

Warden	Cases	State	Violation	Fine
Perry	1	Mississippi	Killing wood duck	\$25 and costs
Shupee	1	Texas	Possessing sandhill cranes	1 hour custody of marshal
Shupee	2	Texas	Possessing ducks in storage in close season	1 hour custody of marshal
Shupee	2	Texas	Killing doves in close season	\$10 each
Smith, C.P.S.	1	Virginia	Possessing ducks in storage in close season	\$10
Stadlmeir	1	Rhode Island	Killing goose from power-boat	\$25
Stadlmeir	1	Rhode Island	Offering egret for sale	\$5
Visart	2	Arkansas	Possessing ducks in storage during close season	\$10 and costs each
Visart	1	Arkansas	Purchasing wild ducks	\$10 and costs

Cases Reported by Wardens for Prosecution.

Warden	Cases	State	Violation
Asmuth	1	Wisconsin	Killing wood duck
Asmuth	1	Wisconsin	Killing ducks in close season
Asmuth	2	Wisconsin	Hunting ducks in close season
Asmuth	3	Iowa	Hunting ducks in close season
Barmeier	1	Missouri	Killing ducks in close season

Cases Reported by Wardens for Prosecution, - cont'd

Warden	Cases	State	Violation
Barneier	1	Missouri	Killing ducks in close season
Birsch	2	Virginia	Offering aigrettes for sale
Birsch	2	North Carolina	Illegal interstate shipment of ducks and geese
Birsch	2	Virginia	Offering migratory birds for sale
Birsch and Farnham	1	Florida	Offering aigrettes for sale
Birsch and Farnham	7	Georgia	Killing doves in close season
Bloxson	3	Maryland	Hunting ducks from motorboat
Bloxson	1	Maryland	Killing bluebird
Bloxson	1	Maryland	Hunting from motorboat and killing grebe
Bloxson	1	Virginia	Offering ducks for sale
Bloxson	20	Virginia	Hunting ducks after sunset
Bloxson, Nottingham and Taylor	1	Virginia	Trapping ducks
Bundock* (Heuser)	11	California	Hunting ducks after sunset
Charlton (Loudenback)	2	Ohio	Hunting ducks in close season
Denmead	2	Virginia	Hunting ducks without gun larger than No. 10 gauge and from powerboat
Fleming*	2	Indiana	Killing geese in close season
Heuser	2	California	Killing robins and meadowlarks
Heuser	4	California	Killing band-tailed pigeons
Hoffman	13	Alabama	Possessing ducks in storage during close season
Hoffman	2	Alabama	Killing snipe during close season
Hoffman	5	Alabama	Killing robins

Cases Reported by Wardens for Prosecution, - cont'd

Warden	Cases	State	Violation
Holmes, J.Q.	1	Nebraska	Hunting ducks in close season
Holmes, J.Q.	5	Nebraska	Killing ducks in close season
Holmes, A.T.	1	Montana	Killing grebes
Linebaugh	2	Indiana	Attempting kill ducks in close season
Linebaugh	3	Illinois	Attempting kill ducks in close season
Linebaugh and Perry	1	Mississippi	Selling ducks
Miller*	4	Virginia	Hunting ducks from motorboat
Miller*	1	Virginia	Hunting ducks in close season
Neale*	1	California	Selling ducks
Pacetti	8	Florida	Killing doves in close season
Pacetti	4	Florida	Killing doves and snipe in close season
Peck*	3	Massachusetts	Killing ducks in close season
Ransom	1	Washington	Possessing great blue heron
Ransom	4	Washington	Possessing ducks in storage in close season
Shaver	1	Minnesota	Offering aigrettes for sale
Shaver	1	Minnesota	Possessing loon
Shaver	6	Minnesota	Hunting ducks after sunset
Shaver	1	Wisconsin	Killing wood duck
Shupee	1	Texas	Killing robins
Shupee	1	Texas	Possessing sandhill cranes
Shupee	3	Texas	Possessing ducks in storage in close season
Shupee	1	Texas	Killing insectivorous birds

Cases Reported by Wardens for Prosecution, - cont'd

Warden	Cases	State	Violation
Shupes	1	Texas	Attempting to kill ducks in close season
Smith, B.E. and Fuchman	3	Maine	Possessing ducks in storage during close season
Smith, C.P.S.	5	Iowa	Hunting ducks in close season
Stadlmeir	1	Rhode Island	Killing goose from powerboat
Steele	3	Washington	Possessing ducks in storage in close season
Steele	1	Washington	Possessing blue heron
Tonkin	1	Idaho	Killing ducks after sunset
Visart	1	Arkansas	Killing robins
Visart	2	Arkansas	Possessing ducks in storage in close season
Visart	2	Arkansas	Purchasing ducks
Visart	1	Arkansas	Possessing ducks in close season
Whitehead	2	Florida	Hunting ducks from motorboat
Whitehead	1	Georgia	Transporting ducks not properly marked
Yerger*	2	Tennessee	Killing insectivorous birds
Yerger*	1	Tennessee	Killing wood duck
Yerger*	2	Tennessee	Killing ducks in close season

* Deputy warden.

April, 1921.

The following appointments have been made to the position of U. S. Deputy Game Warden since March 1:

John E. Foolkes, Houma, La.
Frank W. Klauer, 823 W. 3d St., Davenport, Iowa
George W. Staton, 1229 River St., Baxter Springs, Kans.
John T. Salisbury, 1717 N. 12th St., Boise, Idaho.
Walter L. Hare, c/o State Game and Fish Commission,
Los Angeles, Calif.
Manfred K. Groom, Forsyth, Mo.
Wesley F. Kubichek, Biological Survey, Washington, D. C.
Gordon T. Doe, Homestead, Fla.
Fred M. Brown, c/o State Game Commission, Portland, Oreg.
Prof. Henry Fox, Mercer University, Macon, Ga.
Paul L. Banks, Glen Allan, Miss.
Joseph C. Dean, R.D. #2, Nampa, Idaho.

The appointments of the following U.S. Deputy Game Wardens have been terminated since March 1:

Frank Bryant, Yakima, Washington.
D. M. Cranston, 200 S. Monroe St., Green Bay, Wis.

Importation of Foreign Birds and Animals.

Under date of March 10 an amendment was made to the regulations governing the importation of quail from northeastern Mexico, providing that birds free from disease may be entered without quarantine but subject to inspection at the ports of Eagle Pass, Laredo, and Brownsville, Tex., and New York, N.Y. Under the same date the season for the importation of quail was modified so as to extend from November 15 to April 20.

ALASKA DIVISION

Mr. Donald H. Stevenson, reservation and fur warden for the Aleutian Islands Reservation, has returned to his headquarters at Unalaska, after spending the winter on Unalak and Ushak Islands. He reports that the nucleus of 36 reindeer placed on Ushak Island in September, 1913, by a representative of the Biological Survey, has now increased to 310 head.

A total of 325 shipments of skins of land fur-bearing animals from points in Alaska to the States has been reported to the Bureau since January 1.

Fox farmers in Alaska are reporting good progress in that important industry and state that they are having better success than in previous years.

THE SURVEY

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SF 6, 1921
U. S. Department of Agriculture

Monthly News Bulletin of the Bureau of Biological Survey
United States Department of Agriculture

Vol. 2.

Washington, D. C., May, 1921

No. 5

THE SURVEY is issued for office and field men of the Biological Survey under authorization of the Chief of Bureau as a medium for furnishing information regarding the work of the Bureau, movements of the staff, changes in assignments, and news and personal items of importance, with a view to increasing the interest of the personnel in the work of the Bureau as a whole and in each one's individual work as related to it. It is intended primarily for employees and is not in any sense a publication.

GENERAL NOTES

During his stay in Washington in April, the Prince of Monaco visited Dr. Nelson and other officials of the Biological Survey and was greatly interested in the explanations of the various phases of the work of the Bureau.

Dr. Nelson was appointed on April 5, by the Research Committee of the National Geographic Society, to membership on its Advisory Committee in relation to the Macmillan Baffinland Project.

The third annual stated meeting of the American Society of Mammalogists convened in Washington, May 2 to 4. Among the members of the Survey contributing to the regular program were Messrs. E. A. Goldman, T. S. Palmer, Vernon Bailey, A. H. Howell, and W. B. Bell. Dr. E. W. Nelson was elected president, succeeding Dr. C. Hart Merriam who had filled the position since the organization of the Society. Several members of the Biological Survey are also on the list of directors and on a number of the standing committees. Among the out-of-town members who visited the Bureau during their stay in Washington were Dr. C. C. Adams, of Syracuse, N. Y., Dr. R. M. Anderson, of Ottawa, Canada, and Dr. Joseph Grinnell, of Berkeley, Calif.

Papers read before meetings of the Biological Society of Washington have included the following from members of the Bureau staff: April 16--"Alaska and the Reindeer Industry," Dr. E. W. Nelson; "The Fall Migration of Ducks from Lake Skugog, Ontario," Mr. F. C. Lincoln; April 30--"Notes on Some Parrots Imported into the United States," Dr. T. S. Palmer; "Rats in the War Zone," by Major E. A. Goldman.

An exposition of graphic arts of the Department of Agriculture is open at the Public Library, in Washington, during the first two weeks of May. The exhibit contains paintings, charts, designs, models, and photographs. The Biological Survey is represented by a series of enlarged photographs of birds and animals, from work of Messrs. C. Hart Merriam, H. W. Henshaw, F. M. Dille, A. M. Bailey, E. A. Goldman, T. E. Scheffer, Alexander Wetmore, Vernon Bailey, G. R. Salisbury, and E. R. Kalmbach.

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1960-61: *Journal of the American Revolution*

Measures of interest to the Bureau introduced in the 67th Congress since its convening on April 11 include bills to make game sanctuaries on national forest areas; to protect certain bird reservations; to survey swamp lands; to appropriate funds for exterminating predatory animals and suppressing rabies; to prescribe a Federal hunting license and create public shooting grounds; and, among administrative measures, bills to codify the printing laws, to limit deficiencies in appropriations, to provide a national budget, to reclassify civilian positions, and to transfer Federal interests in Alaska to an Alaskan Development Board.

Among the manuscripts submitted in April for permission to publish outside the Department were the following:

Lincoln, F. C., "American Common Tern Recovered in West Africa," for The Auk.

Berholser, H. C., "A List of the Mammals in the Vicinity of McGregor, Iowa," for Iowa conservation; "A Revision of the Races of Dendroica auduboni," for Ohio Journal of Science; and "The Anatine Genus Nyroca and Its Nearest Allies," for Proceedings of the Indiana Academy of Science.

Mr. H. M. Hoyt, who has been filling the position of chief clerk in the Washington office has been transferred, effective May 1, to the Denver, Colo., office, where he will care for clerical details connected with predatory animal and rodent-control work.

Mr. Edward Muse has been transferred from the Accounts Section to a clerical position in the predatory animal inspection office at Cheyenne, Wyo., effective April 16. On May 3 a son was born to Mr. and Mrs. Muse, both of whom have been employees of the Bureau in the Washington office.

Miss Helen L. Moore has been transferred from the War Department to a position as stenographer in the Section of Accounts.

BIOLOGICAL INVESTIGATIONS

A cable message recently received from Dr. Alexander Wetmore, dated Valparaiso, Chile, April 30, stated that he was sailing that day for the United States, his route home to be by way of the Panama Canal. His arrival will mark the completion of a very successful trip lasting about eleven months, the results of which can not fail to be of great importance, from the standpoint of permanent scientific knowledge, and in the administration of the Migratory Bird Treaty Act and in the promulgation of possible international measures for the protection of birds which annually pass back and forth between North and South America.

Mr. George G. Cantwell spent the month of April in field work in northern Washington, mainly in the vicinity of Leaven Lake, Colville, and Spokane.

Dr. W. P. Taylor continues work on the fauna of Washington, at his headquarters at La Jolla.

Mr. Vernon Bailey is still stationed at Continental, Ariz., studying the life habits of various mammals.

19. *Therapeutic Use of the Human Microbiome* (10 min)

ECONOMIC INVESTIGATIONS

Dr. Fisher plans to leave Washington Monday, May 9, on a trip to confer with the field officers of the Bureau, State officials, and others interested in the investigations and field operations of the division. His first stop will be at El Reno, Okla.

During the early part of April Mr. Frank G. Ashbrook was in the vicinity of Boston, Mass., conferring with officials of the American Fox Breeders' Association and others relative to the rearing of silver foxes and to conditions on various fox farms. He returned to Washington to attend a conference of representatives of the American Fox Breeders' Association and the National Silver Fox Breeders' Association of America on April 8 in the office of Dr. Nelson, regarding a proposed tariff on the importation of silver and black foxes into the United States. Mr. J. S. Sterling represented the former association and Mr. A. L. Williams, the latter. It was agreed that it would be in the interests of the fox-raising industry to have a duty of \$350 each levied on black and silver foxes imported for breeding purposes. The conclusions of the representatives were presented to the appropriate subcommittee of the Committee on Ways and Means with a view to obtaining favorable action on recommendations on the tariff bills now pending.

Responses made to a questionnaire recently sent out by the Bureau show that there are at present 500 ranches in the United States on which fur-bearing animals are being produced. Of these 265 are devoted to the production of silver and black foxes. The reports show that there are approximately 5,000 silver foxes now held in captivity on these ranches for breeding purposes. The value of fur-bearing animals held in captivity for purposes of propagation and the equipment required for their care aggregates more than \$4,000,000.

With a view to protecting the fox-producing industry in the United States from contagious diseases, including animal parasites, the Secretary of Agriculture has issued an order effective June 1, 1921, subjecting all animals offered for importation to quarantine inspection or examination, and providing that all foxes imported for breeding purposes must be entered through ports designated for the entry of foxes, as follows: Boston, Mass., New York, N. Y., Rouses Point, N. Y., Calais, Me., Pembina, N. Dak., and Seattle, Wash.

Dr. Karl B. Hanson reports that two martens have recently been born on the Experimental Fur Farm, At Keeseeville, N. Y. These are the first young produced by this species on the experimental farm and are among the few that have been born in captivity. They are thriving satisfactorily and there is every prospect that they will be brought to maturity. This affords an opportunity to learn many points of interest regarding the early development of animals of this species and to determine practical measures to be employed in rearing them in captivity.

4. PRACTICAL METHODS OF PREDICTION

May, 1921.

Mr. J. Stokely Ligon, who was supposed to be a confirmed bachelor and interested only in the capture of wolves and other predatory animals, sprung a surprise by taking a day off April 28 to join the ranks of the benedicts. This event occurred at some point in northern Michigan, where Mr. Ligon was supposed to be devoting his mind exclusively to the pursuit of predatory animals and in coaching hunters in the art of capturing them. He reports that the taking of a bride was the longest drawn out and most difficult capture he has ever made. The Bureau staff join in congratulating him on the successful outcome of his persistence and well-placed lures.

Inspector Holman recently received from Hunters S. R. and J. S. Dunham two fine specimens of mountain lion kittens. After being displayed for a time they were shipped to the National Zoological Park, Washington, D. C., where they now appear to be thriving. Inspector Musgrave, while in the vicinity of Globe, Ariz., also captured three young mountain lion kittens which were forwarded to the National Zoological Park. They came through in good condition and are now being exhibited. He also sent a young bear which he had christened "Teddy Junior" but it unfortunately died soon after arrival in Washington. These five specimens make a very attractive and interesting addition to the already excellent series of animals which have been contributed to the Park by Predatory Animal Inspectors.

Mr. Holman reports that Hunters S. R. and J. S. Dunham succeeded in killing 20 mountain lions on the Kaibab National Forest last winter and destroyed 14 unborn young, while 16 mountain lions were also killed by other hunters in the vicinity. This reduces very materially the supply on this forest where they have heretofore proved exceedingly destructive to game and live stock. Plans are being laid for a continuance of this work during the coming winter, and it is hoped that arrangements may be effected for the active cooperation of the National Park Service in completing the work on this forest, which includes the Grand Canyon National Monument.

Mr. Stanley P. Young has not only demonstrated his ability to capture wily and notoriously destructive wolves by his recent work in the vicinity of Thatcher, Colo., but also his ability to exert effective moral suasion on men who take the liberty of carrying away animals caught in Government traps. By his good follow-up work he recently secured the return of a wolf skin which had been taken and also overtook a man who was getting away with a bobcat skin and trap and secured their return.

The leaders of the rodent eradication work in Nebraska, Oklahoma, and Texas report good progress in rat control work and that the undertaking is proving popular with county agents and the people.

A heavy infestation of rats, which had been burrowing extensively under steps adjacent to one of the Department of Agriculture buildings, in Washington, D. C., was recently completely cleaned up by the application of carbon bisulphide.

Considerable interest has recently been manifested in the production of beavers for fur and in removing them from places where their activities were proving destructive to points where they would prove of interest and value. The investigations conducted by Messrs. Scheffer and Couch in the

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1880-1881, and 1882-1883. The following year, 1884, the first
polarization data from this flow field were obtained, and the results were published in
1885. The first data were obtained by the use of a polarimeter.

Načrtovanje infrastrukture mora biti dobitna, precizna i u skladu s potrebljivim i potrebnim zahtjevima za izgradnju i rješenje načrta te izgradnje, a u skladu s potrebljivim i potrebnim zahtjevima za rješenje načrta te izgradnje.

reinforcing and self-reinforcing and without any element of self-reinforcement. Activation which occurs normally won't count towards this for the purposes of the test, because it's being driven just through the action of reinforcement or reward. So if you're just in a room, sitting there, it's not going to count as self-reinforcement, but if you're in a room, sitting there, and you're getting a reward, then that would count as self-reinforcement.

State of Washington and their successful efforts in capturing beavers, which were destroying orchards and growing crops along streams in Walla Walla County, and in removing them to Rainier National Park will prove of value in cases where such undertakings are desirable. The beavers taken into the park have established themselves at the mouth of Paradise Creek, perhaps a half mile from where they were liberated.

Mr. I. N. Gabrielson, in Oregon, and Mr. Leo K. Crouch, in Idaho, were able to do very effective work against jack rabbits during the past winter, despite the somewhat unfavorable weather conditions prevailing during practically the entire season.

Mr. D. A. Gilchrist in Arizona reports excellent results in poisoning cottontails and jack rabbits by dusting strychnine alkaloid on freshly cut alfalfa. This method is proving effective in places where other means had proved unsatisfactory. He reports 55 rabbits killed by the use of one-quarter of an ounce of strychnine placed on five pounds of fresh, green alfalfa. He is also getting good results with pit-fall traps set under netting fence at places used by the rabbits. Eighty cottontails and young jacks were caught in one such trap within a week.

Mr. Frank J. Hale resigned as assistant predatory animal inspector in Wyoming, effective April 4.

Dr. Glenn R. Bach, who has been serving as assistant predatory animal inspector in Wyoming, has been transferred to the State of Washington where he will assist Inspector Jewett until June 30, in carrying on the predatory animal operations in that State. The Washington-Oregon district will be separated into two districts on July 1, Mr. Jewett retaining supervision of the work in Oregon, and Dr. Bach taking charge of work in Washington, with headquarters probably at Spokane.

Beginning July 1 the State of South Dakota will be made into a separate predatory animal district and Mr. Louis Knowles, who has been assisting Mr. Bateman in the Montana-North Dakota district, will be placed in charge. His headquarters will probably be at Pierre.

Hunter Bud Dalrymple made a very successful capture of a female wolf and her eight pups in their den in the vicinity of Edgemont, S. Dak., the second day of trailing for this catch.

Miss Beulah E. Fairley, formerly in the office at Billings, Mont., resigned on April 30 to accept a position in the Capitol building, under appointment of the Governor.

Economic Ornithology

Following an appeal from fruit growers of Oregon for relief from the depredations of robins on the cherry crop, Mr. C. C. Sperry has been detailed to visit the State about the middle of May to study the situation. Under the provisions of the Migratory Bird Treaty Act, permission may be given for taking aggressive measures against the birds if it becomes established that they are a serious menace to small-fruit raising.

Mr. Remington Kellogg has returned from his trip to the Universities of Michigan and Wisconsin where he secured the stomachs of over 500 toads, to be used in a study of the food habits of these batrachians.

MAMMAL AND BIRD RESERVATIONS

Warden A. P. Chambers, of the Wind Cave Game Preserve, South Dakota, reports the birth of nine buffalo calves this spring, and the death of one bull elk.

Warden A. R. Hodges, of the National Bison Range, Montana, reports the death of a buffalo cow, and the birth of two buffalo calves during the month of April.

MIGRATORY BIRD TREATY AND LACEY ACTS

Chief Warden Lawyer left on April 28 to confer with State game officials, sportsmen, and others in New York City, returning on May 7.

Deputy Chief Warden Denmead interviewed local game officials and sportsmen at Cumberland, Md., on April 19-20, on important matters relating to game protection.

Federal Judge Jacob Trieber, at Little Rock, Ark., has imposed maximum penalties on John Hardy and Nick Gurno, charged with selling wild ducks in violation of the Federal law. Hardy was fined \$500, and Gurno was sentenced to six months in jail and assessed, in addition, a fine of \$50. It was alleged that both of the accused have been leading figures in illegal traffic in wild ducks. Both had previously been arraigned in Federal court for violation of the game laws.

A bill (S. 1452) of much interest to the Bureau, introduced in the Senate on May 2 by Senator New, of Indiana, provides for the establishment of shooting grounds for the public, the establishment of game refuges and breeding grounds, the protection of migratory birds, and a Federal license to cost one dollar for persons hunting migratory birds. A similar bill (H. R. 5823) was introduced in the House by Representative Anthony, of Kansas, on May 5.

The following appointments have been made to the position of U. S. Deputy Game Warden since April 1:

August A. Busch, St. Louis, Mo.

Ira G. Smith, Box 255, Green Bay, Wis.

Morris G. Adler, 8 east Fourth St., Cincinnati, Ohio.

Edgar Q. Beckwith, 522 Eleventh Ave., Clinton, Iowa.

William Bauer, R. D., Thunder Hawk, S. Dak. (Res. N. Dak.)

Henry E. Willatts, Smithville, N. J.

Charles P. Sorensen, 118 W. Fourth St., Rock Springs, Wyo.

Omer K. Loudenback, Batavia, Ohio.

Claude Nugier, Ferry, Ia.

John J. Moon, Kemmerer, Wyo.

John W. Keeffe, 418 North First St., Boise, Idaho.

Antonio C. Ortiz, 916 North Second St., Albuquerque, N. Mex.



Record of Cases Disposed of - Reports Received in April.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Asmuth and B. E. Smith	4	North Carolina	Hunting ducks after sunset	\$10 and costs of \$20.61 each
Barneier	3	Illinois	Killing geese in close sea- son	\$25 each and costs
Bloxson	2	Delaware	Killing ducks in close sea- son	\$10 each
Britton	2	Oklahoma	Hunting ducks in close sea- son	\$25 each
Hoffman	13	Alabama	Killing doves in close sea- son	\$15 each
Merrill	28	Illinois	Possessing ducks in storage in close season	\$25 each and costs
Merrill	2	Illinois	Killing insectivorous birds	\$25 each and costs
Pacetti	1	Florida	Killing doves	\$1
Pacetti	1	Florida	Attempting kill ducks in close season	\$5
Ransom	1	Washington	Killing grebe	\$10
Ransom	2	Montana	Hunting ducks after sunset	\$5 each and costs
Ransom	1	Montana	Possessing a swan	\$20 and costs
Shupee	1	Texas	Attempting to kill Upland plovers	\$300 bond forfeited
Shupee	4	Texas	Hunting ducks after sunset	\$10 each
Shupee	1	Texas	Hunting ducks after sunset	\$5
Shupee	2	Texas	Killing insectivorous birds	\$10 each
Shupee	1	Texas	Killing meadowlarks	\$5
Shupee	1	Texas	Possessing doves in close season	\$5

and the 1990s, the number of people with the disease has increased by 100%.

Record of Cases Disposed of - Reports Received in April - cont'd

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Shupee	1	Texas	Killing doves in close season	\$10
Shupee	2	Texas	Killing rails in close season	\$10 each
Shupee	1	Texas	Killing rails in close season	\$5
Shupee	1	Texas	Offering ducks for sale	\$100
Smith, B.E.	2	Maine	Killing loons	\$5 each
Smith, B.E.	1	Maine	Killing wood ducks	\$5
Smith, B.E.	1	Maine	Killing wood ducks	\$10
Smith, C.P.S.	5	Iowa	Killing ducks in close season	\$25 each and costs
Visart	1	Arkansas	Hunting ducks after sunset	\$1 and costs of \$16.65

Cases Reported by Wardens for Prosecution

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Barneier	1	Illinois	Attempting kill ducks in close season
Birsch	1	North Carolina	Transporting geese violation State law
Bloxson	1	Maryland	Attempting kill jacksnipe in close season
Bloxson	1	Maryland	Hunting ducks in close season
Bloxson	1	Virginia	Killing green heron
Britton	4	Oklahoma	Killing ducks in close season
Charlton	1	Ohio	Hunting ducks in close season
Concannon*	2	Kansas	Killing ducks in close season
Hoffman	1	Alabama	Killing robins
Hoffman	1	Louisiana	Possessing ducks for purposes of sale
Kelsey and Shaver	1	South Dakota	Shooting at ducks in close season
Leach*	1	Virginia	Killing cedar waxwings

Planned to spend all day at the beach, but the beach is closed to swimmers.

Cases Reported by Wardens for Prosecution - cont'd

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
LeCompte, E. Lee	1	Maryland	Killing ducks in close season
Linebaugh	1	Kentucky	Killing blue heron
Linebaugh	1	Indiana	Killing ducks in close season
Linebaugh	1	Illinois	Killing ducks in close season
Maddox, Geo. W.	1	Maryland	Killing ducks in close season
Merrill, D.F., and B.Q.	4	Illinois	Killing sandpipers
Merrill and MacGary	2	Indiana	Killing ducks in close season
Shupee	3	Texas	Selling ducks
Shupee	2	Texas	Attempting to kill upland plovers
Smith, C.P.S.	1	Florida	Hunting ducks in close season
Visart Wh. Whitehead	1	Arkansas	Selling ducks
Whitehead	8	Georgia	Killing doves in close season
Yerger*	1	Tennessee	Killing ducks in excess of bag limit
Yerger*	3	Tennessee	Killing insectivorous birds

* Deputy warden.

ALASKA DIVISION

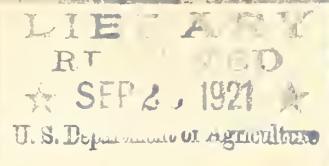
Mr. Ernest P. Walker has assumed his duties as Chief Fur Warden for Alaska, with headquarters at Juneau.

Mr. Ray C. Steele, Game and Fur Warden, with headquarters at Portland, Oreg., has been temporarily transferred to Seattle, Wash., to look after shipments of furs from Alaska arriving at that port during the next few months.

The Bureau has received interesting reports from Mr. Donald H. Stevenson, Reservation and Fur Warden for the Aleutian Islands Reservation, with headquarters at Unalaska, as a result of his investigations pertaining to reindeer made during the winter on Unalaska and Umnak Islands.

It is planned to purchase a sea-going boat for the reindeer experiment station employees in order that they may be better able to visit reindeer herds along the coast during the summer.

19. *Leucosia* *leucostoma* *leucostoma* *leucostoma* *leucostoma*



THE SURVEY

Monthly Newsbulletin of the Bureau of Biological Survey
United States Department of Agriculture

Vol. 2. Washington, D. C., June, 1921 No. 6

THE SURVEY is issued for office and field men of the Biological Survey under authorization of the Chief of Bureau as a medium for furnishing information regarding the work of the Bureau, movements of the staff, changes in assignments, and news and personal items of importance, with a view to increasing the interest of the personnel in the work of the Bureau as a whole and in each one's individual work as related to it. It is intended primarily for employees and is not in any sense a publication.

GENERAL NOTES

The Secretary of Agriculture has condemned the proposal to create an Alaskan Development board, in a letter addressed to Hon. C. F. Curry, author of the bill introduced for the purpose (H.R. 5694). If the bill were passed it would transfer from this Bureau all its work in Alaska, including the protection of land fur-bearing animals, the administration in that Territory of the Lacey Act, the migratory bird treaty act, and the care of the Federal bird reservations there. The Secretary's letter appears in full in the "Weekly News Letter" for June 1, 1921. Dr. Nelson attended all the hearings on the bill, which covered a whole week, and was called upon to discuss the work of the Bureau in Alaska affected by the proposed transfer.

The following publications of the Bureau were issued during May:
Department Circular 170, "Instructions for Bird Banding," by Frederick C. Lincoln; pp. 19, figs. 11, May 10, 1921 (date of issue, April, 1921).

Department Bulletin 936, "Wild Ducks and Duck Foods of the Bear River Marshes, Utah," by Alexander Wetmore; pp. 20, pls. 4, May 31, 1921.

Among manuscripts submitted in May for approval for outside publication were the following:

Ashbrook, F. G., "The Fur Trade and the Fur Supply," for the Journal of Mammalogy, a revision of his paper "Recent Notes on the Fur Trade in the United States," read before the Biological Society of Washington, on May 14, 1921.

Gabrielson, Ira N., "Some Hawks of Harney Valley, Oregon," for The Condor; "Factors Contributing to the Destruction of Birds' Nests and Eggs," for the Wilson Bulletin.

Preble, Edward A., "Saunders on the Birds of Montana," and "Philadelphia Vireo in Montana," for the Condor.

Mr. T. E. Jacoby has been designated Chief Clerk of the Bureau, effective May 1, succeeding Mr. H. M. Hoyt in this position.

Mr. Norris A. Olmstead was appointed stenographer in the Administrative Office, on May 16, by transfer from the Bureau of Animal Industry.

BIOLOGICAL INVESTIGATIONS

Mr. E. A. Goldman attended the annual meeting of the American Association of Museums, at Cleveland, Ohio, May 22-26, as Bureau representative, and presented a paper on the subject of "Field Work in Vertebrate Zoology."

Dr. Alexander Wetmore arrived in Washington from his South American trip on May 19, after an absence of nearly twelve months, during which he was studying the status of our migratory birds in Argentina, Paraguay, and Uruguay. The bulk of the species encountered were shorebirds, found in the marshy pampas or on the coastal mudflats. Among the more familiar forms may be mentioned the barn swallow that ranged with flocks of native swallows in the open country. It is of interest to note that the English sparrow, introduced originally near Montevideo and Buenos Aires, was encountered in abundance in the broad stretch lying between northern Patagonia on the south and Asuncion, Paraguay, and Rio de Janeiro, Brazil, on the north. His collections of native birds represent nearly 400 species. In April he made a brief stop near Valparaiso, Chile, before returning north via the west coast of South America and the Panama Canal to New York.

Mr. Vernon Bailey is at Duluth, Minnesota. His plans for the summer include investigations of the life habits of minkrats and beavers in Minnesota, Wisconsin, and Michigan with special view to the possibilities of their use in fur farming.

In continuation of work on the fauna of Washington, Dr. W. P. Taylor is planning a trip to the Olympic Peninsula, for the summer season. Mr. G. G. Cantwell has been working on the project during May, mainly at Calispell Lake, Calispell Peak, Metaline Falls, Metaline Peak, and Sullivan Lake, all in the northeastern part of the State.

ECONOMIC INVESTIGATIONS

Encouraging reports are coming in from Wyoming covering the destruction of the Big Piney wolf pack of nine adults. All have been taken but two and in addition seventeen pups have been captured.

Arizona is continuing the good work in destroying mountain lions, three adults and four cubs having been captured.

Excellent results from wolf-denning operations as well as from poisoning activities are being obtained in Utah. Serious losses in sheep flocks reported by one live-stock concern were immediately stopped by the assignment to this section of a Federal hunter, who took four old coyotes and five pups in six days.

The leaders in the several rodent districts report excellent results from their poisoning operations and that the steadily increasing interest of the ranch owners is evidenced by the active cooperation accorded the Bureau workers.

Dr. Fisher is now on the Pacific Coast having visited district headquarters at El Reno, Okla., San Angelo, Texas, Albuquerque, N. Mex., and Phoenix, Ariz., where interesting conferences were held with the district leaders on the completed work in rodent and predatory-animal campaigns as well as on the projected activities.

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Dr. Bell left on June 5 for Keeseeville, N. Y., to inspect the experimental fur farm and to discuss with Dr. Hansen the work already accomplished as well as that projected. Mr. Frank G. Ashbrook will join him at Keeseeville to take part in the conference. Mr. Ashbrook left on June 1 on an extended trip through the New England States, eastern Canada, including Prince Edward Island, and the Eastern North-Central States for the purpose of securing data from those engaged in raising foxes and other fur-bearing animals.

The name of Mr. W. E. Crouch should have appeared in the May number of THE SURVEY (page 5, paragraph 2) instead of that of Mr. Leo K. Crouch, in connection with rodent operations in Idaho.

Mr. E. L. Pineau has received a probational appointment as predatory animal inspector, and Mr. John C. Catlin, jr., a like appointment as biological assistant, both for service in the New Mexico District under the direction of Mr. Charles F. Bliss, District Leader.

Mr. Charles E. Reno has received a probational appointment as biological assistant in the Arizona District, reporting to Mr. D. A. Gilchrist, District Leader.

Mr. Edward Rasmussen received a probational appointment as predatory animal inspector, reporting to Mr. George E. Holman, District Leader for the State of Utah.

Mr. Walter D. Perry received probational appointment as biological assistant in the Wyoming-Nebraska District, under Mr. A. M. Day, District Leader.

Miss Elizabeth Olmsted, clerk in the Office of Farm Management, was transferred on June 1, to this Bureau and assigned to duty in this Division.

Economic Ornithology

Mr. John R. Malloch, formerly at the University of Illinois, has taken up work in the Division. His first duties are to complete a series of drawings of insect parts for use in a manual of bird stomach examination.

MAMMAL AND BIRD RESERVATIONS

Warden Hodges reports 43 buffalo calves born on the National Bison Range, Montana, this spring; Warden Chambers, of the Wind Cave Preserve, South Dakota, reports eleven buffalo calves; and one buffalo calf is reported at Sullys Hill Game Preserve, North Dakota.

Acting Inspector George M. Riddick is making a tour of inspection of the bird refuges in the Gulf of Mexico.

Mr. Fred M. Dille, Reservation Inspector, in company with Mr. M. S. Garretson, Secretary of the American Bison Society, is on a trip of inspection in Idaho to investigate a proposed antelope preserve in that State.

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On May 20, 1921, the President revoked the following Executive orders, which set aside certain lands as preserves and breeding grounds for native birds:

Executive Order No. 961, dated October 26, 1908, which set aside Loch-Katrine Reservation, Wyoming.

Executive Order No. 1032, dated February 25, 1909, in so far as it pertained to the East Park Reservation, California, and Keechelus, Kachess, Clealum, and Bumping Lake Reservations, Washington.

Executive Order No. 2438, dated August 9, 1916, setting aside San Francisco Bay (Goat Island) Reservation, California.

These refuges were not of sufficient value for the conservation of birds and the Department recommended their discontinuance. They will, therefore, be discontinued as bird refuges but the first two groups will retain their status as reservoir sites and the third as a naval training station.

MIGRATORY BIRD TREATY AND LACEY ACTS

Reports received from wardens and others throughout the United States indicate that the unlawful killing of migratory waterfowl during the spring flight was greatly reduced compared with the vast numbers killed during the spring flights in former years, and it has been found that a large majority of the people, realizing that the Government is doing all in its power to enforce the law, are not molesting the birds. As a result birds are breeding in many places from which they were formerly driven because of being constantly disturbed by spring shooters.

No considerable number of cases of violation of the Migratory Bird Treaty Act have been obtained in New Mexico but one of more than passing interest was that prosecuted in the Federal court at the April term at Santa Fe, wherein the defendant was charged with possessing in close season two recently killed wild ducks. The accused, a State deputy game warden, on being arraigned entered a plea of guilty and the judge after severely admonishing him for commission of the act, imposed a fine of \$350 and costs.

A case originating in the Eastern District of Arkansas against a hotel company at Hot Springs, charged with selling ducks to guests, was terminated on plea of guilty and payment of a fine of \$250 and costs.

It was with deep regret that this office learned of the death on May 24 of the wife of Warden Whitehead; and on May 15 of the death of Deputy Warden Edgar Q. Beckwith of Clinton, Iowa. Mr. Beckwith was killed in a railway accident.

The following report from Warden Kelsey regarding the spring flight of geese in South Dakota will be of interest, showing the splendid results being secured under the Migratory Bird Treaty Act Regulations:

"Never, even in the memory of the 'old timers' has eastern South Dakota seen a spring flight of wild geese such as has taken place this spring. They have flocked into lakes and fields in countless thousands. For any one to believe the number of these birds and the extent of their flight would be practically impossible without first seeing same. Just why this phenomenal flight should have passed over this section of the country it is impossible to state with any degree of accuracy, but my opinion is that the country to the west where the spring flight of these birds as a rule takes place is dry owing to the light snowfall, while this country abounds with lakes and pot-holes and the feed is exceptionally plentiful."

Na jardim, com a calma, agradável, a brisa suave, a sombra das árvores, a natureza é mais apreciada. A natureza é a maior fonte de inspiração.

Na praia, com a areia, o sol, o mar, a brisa, a natureza é mais apreciada. A natureza é a maior fonte de inspiração.

No interior, com a calma, a paz, a quietude, a natureza é mais apreciada. A natureza é a maior fonte de inspiração.

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A letter from one of the Bureau's correspondents in South Carolina states that two years ago he saw and counted on his plantation on the Cooper River 2 American egrets; last season he counted 10; and this season he has counted 29 on two different occasions. Reports concerning increases of this kind are very gratifying.

The annual game law bulletin is now in course of preparation but copies probably will not be available for distribution before sometime in August due to the fact that is not yet available regarding action taken by some of the State legislatures relative to game matters. In connection with the publications prepared in this Division it is interesting to note that 250,000 copies of the "Game laws for 1920" were issued; 60,000 copies of the "Laws Relating to Fur Bearing Animals, 1920," and 3,000 copies of the "Directory of Officials and Organizations Concerned with the Protection of Game, 1920."

Warden Charles F. Heuser, with headquarters at Sacramento, Calif., has resigned, effective May 31.

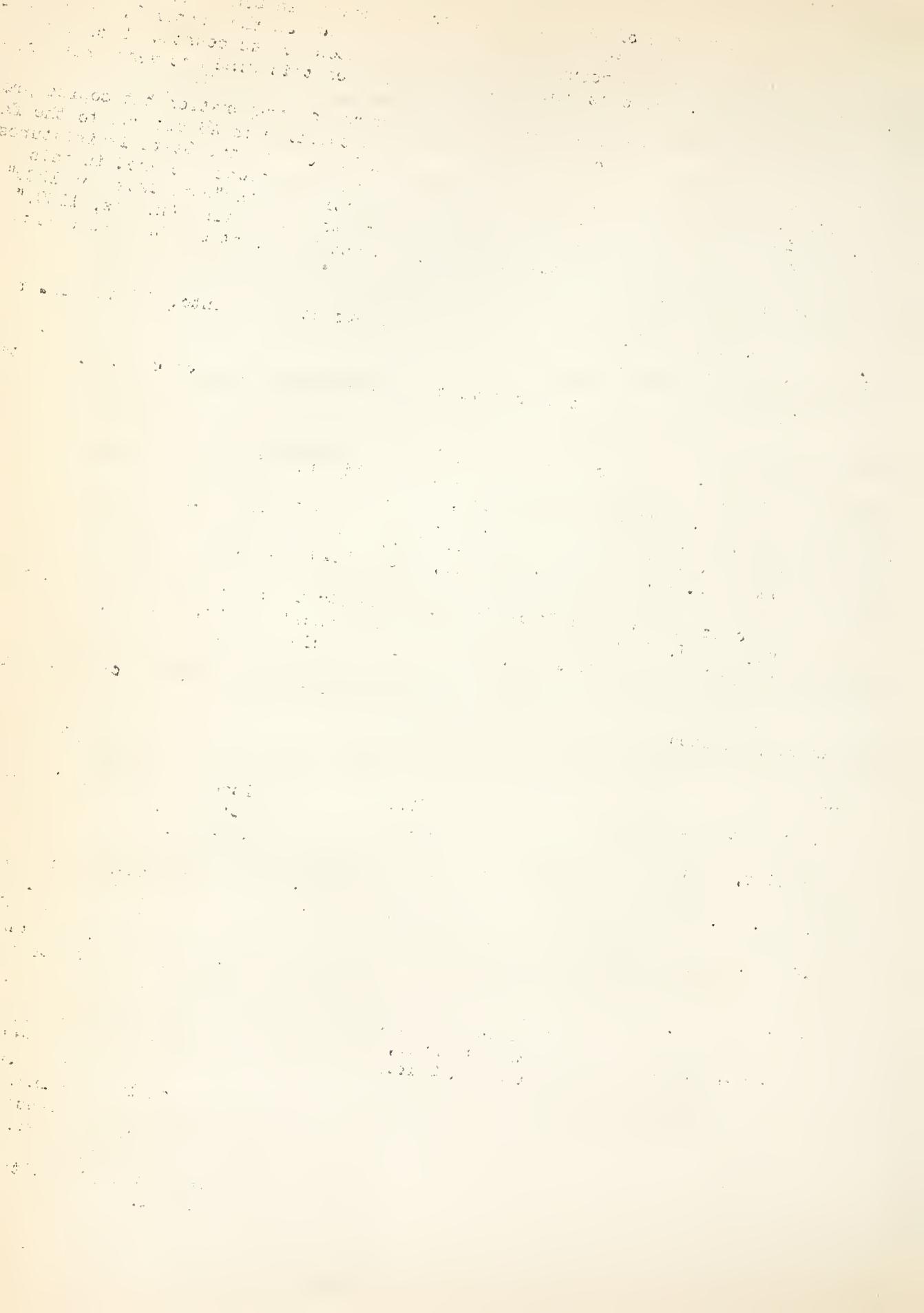
The following appointments have been made to the position of U. S. Deputy Game Warden since May 1:

Alonzo E. Kaessner, Socorro, N. Mex.
 Henry C. Fuller, 1845 B. St. N. W., Washington, D. C.
 Walter E. Martin, Central City, Nebr.
 Raymond P. Monplasire, P. O. Box 274, Clear Lake, Iowa.
 Harry M. Saltmer, 137 W. Manheim St., Germantown, Pa.
 George B. Hooley, 26 Almire St., Bloomfield, N. J.

Appointments of the following U. S. Deputy Game Wardens have been terminated:
 William J. Smittle, 83 West Broadway, Council Bluffs, Iowa.
 Peter Vreidenburgh, 138 W. Main St., Freehld, N. J.

Following is a list of the names, addresses, and districts of U. S. Game Wardens, revised to June 1, 1921.

<u>Name</u>	<u>Address</u>	<u>District</u>
Asmuth, Conrad F.	200 West Water St., Milwaukee, Wis.	Wisconsin and upper peninsula of Michigan.
Barneier, Harry	2847 Victor St., St. Louis, Mo.	Missouri.
Birsch, Wm. L.	P. O. Box 237, Norfolk, Va. (Res. 369 Hamilton Ave.)	Virginia south of the James River and North Carolina.
Bloxsom, Thos. T.	Locustville, Va.	Virginia north of the James River and Delaware, Maryland, and the District of Columbia.
Britton, B. R.	Box 185, Socorro, N. Mex.	New Mexico.
Charlton, M. A.	285 E. 12th Ave., Columbus, Ohio.	Ohio; lower peninsula of Michigan; and that portion of Indiana east of a line drawn, generally speaking, from Elkhart to Indianapolis, thence to Jeffersonville, with the privilege of visiting any of the cities mentioned.



June, 1921.

<u>Name</u>	<u>Address</u>	<u>District</u>
Farnham, P. S.	Owego, Oneonta New York.	New York and Pennsylvania.
Hilliard, P. K.	110 Seaside Ave., Atlantic City, N. J.	New Jersey.
Hoffman, Wm. H.	P.O. Box 1022, Mobile, Ala. (Res. 355 St. Michael St.)	Alabama; and in Florida, the counties of Escambia, Santa Rosa, Okaloosa, and Walton.
Holmes, Jno. Q.	Orleans Neb.	Nebraska and Kansas.
Kelsey, Jay V.	318 W. Kemp Ave., Watertown, S. Dak.	South Dakota.
Linebaugh, S. W.	Russellville, Ky.	Kentucky; and Tennessee, except the counties of Shelby, Fay- ette, Hardeman, McNairy, Hardin, Decatur, Henderson, Chester, Mad- ison, Haywood, Crockett, Launder- dale, and Tipton.
Merrill, B. G.	Hinsdale, Ill.	Illinois; and that portion of Indiana west of a line drawn generally speaking, from Elkhart to Indianapolis, thence to Jeffersonville, with the privilege of visiting any of the cities mentioned.
Mushbach, Geo. E.	Box 438, Billings, Mont.	Montana, except the counties of Lincoln, Flathead, Sanders, Mineral, Missoula, Powell, Ravalli, Granite, and Deer Lodge; and Wyoming.
Pacetti, B. J.	Ponce Park, Fla.	Florida south of but not in- cluding the counties of Duval, Baker, Bradford, Alachua, and Levy.
Perry, John E.	Lock Box 301, Memphis, Tenn.	Mississippi; and in Tennessee, the counties of Shelby, Fay- ette, Hardeman, McNairy, Hardin, Decatur, Henderson, Chester, Madison, Haywood, Crockett, Lauderdale, and Tipton.
Ransom, W. H.	708 W. 20th Ave., Spokane, Wash.	Washington east of the summit of the Cascade Mountains; Idaho north of the Salmon River; and in Montana, the counties of Lincoln, Flathead, Sanders, Min- eral, Missoula, Powell, Ravalli, Granite, and Deer Lodge, with the privilege of visiting Helena when necessary to con- fer with the State Game Warden.
Shaver, B. J.	c/o Game and Fish Comr., St. Paul, Minn.	Minnesota.

June, 1921.

<u>Name</u>	<u>Address</u>	<u>District</u>
Shupee, Geo. C.	Box 964, San Antonio, Texas.	Texas west and north of and including Ft. Worth, Hillsboro, Waco, Temple, Cameron, Flatonia, Cuero, Victoria, and west of and including San Antonio Bay. Maine, New Hampshire, and Vermont.
Smith, B. E.	10 Grassmere Rd. Blvd, Park, Portland, Maine.	Iowa.
Smith, C.P.S.	218 Federal Bldg., Davenport, Iowa.	Massachusetts, Rhode Island, and Connecticut.
Stadlmeir, Albert,	69 Massasoit Ave., E. Providence, R.I.	Washington; and Oregon west of the summit of the Cascade Mts; also Klamath and Lake Counties.
Steele, Ray C.	515 P.C.Bldg., Portland, Oreg.	Oregon east of the summit of the Cascade Mountains except Lake and Klamath Counties; and Idaho south of the Salmon River.
Tonkin, George	Baker, Oreg.	Arkansas and Oklahoma.
Visart, E. V.	2705 State St., Little Rock, Ark.	Alaska.
Walker, E. P.	Juneau, Alaska.	Florida west and north of and including the counties of Duval, Baker, Bradford, Alachua, and Levy, except Escambia, Santa Rosa, Okaloosa, and Walton Counties; also that portion of Georgia south of the line of the Central R.R. of Georgia from Columbia, Ala., to Albany, Ga., and south of the Atlantic Coast Line R.R. from Albany to Waycross, Ga., extending to the western lines of Pierce and Charlton Counties in Ga.
Whitehead, E. B.	602 Smith Ave., Thomasville, Ga.	

Record of Cases Disposed of - Reports Received in May.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Barmeier	3	Missouri	Hunting insectivorous birds	\$25 each and costs
Britton	1	New Mexico	Possessing two ducks in close season	\$350 and costs
Birsch	1	Virginia	Selling ducks	\$10
Hoffman	2	Alabama	Killing grebes	\$5 each

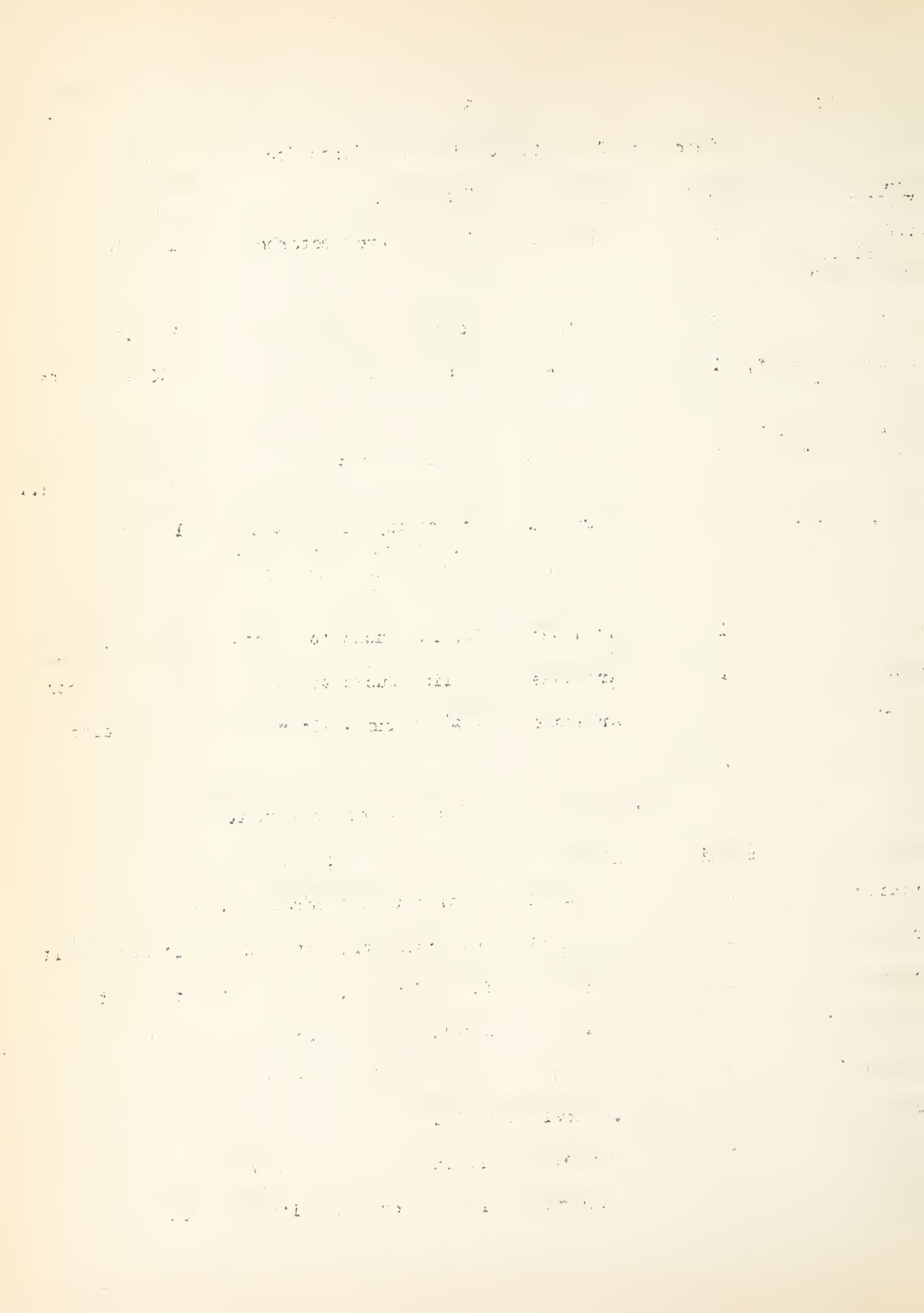
Record of Cases Disposed of - Reports Received in May - Cont'd

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Hoffman, Merrill, and Oberhaus*	2	Alabama	Hunting from motorboat	\$10 each
Pacetti	2	Florida	Possessing herons	\$10 each
Riddick, Thomas*, and Visart	1	Arkansas	Selling ducks	\$500 and costs
Riddick, Thomas*, and Visart	1	Arkansas	Selling ducks	\$50 and six months in jail
Smith, C.P.S.	2	Virginia	Possessing wild geese in close season; also possessing parts of swan	\$10 each
Visart	1	Arkansas	Selling ducks to guests	\$5 and costs
Visart	1	Arkansas	Selling ducks to guests	\$250 and costs
Visart	1	Arkansas	Hunting ducks after sunset	\$5 and costs

*U.S. Deputy Game Warden

Cases Reported by Wardens for Prosecution

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Barmeier	3	Missouri	Hunting insectivorous birds
Barmeier	1	Missouri	Possessing protected birds without permit
Birsch	1	Virginia	Taking wood duck eggs without permit
Charlton	1	Ohio	Shooting at catbirds
Concannon*	6	Kansas	Killing ducks in close season
Farnham	2	Pennsylvania	Killing robins
Farnham	2	Penna.	Killing great blue herons
Hoffman	2	Alabama	Killing doves in close season



Cases Reported by Wardens for Prosecution - Cont'd

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Linebaugh	1	Kentucky	Killing ducks in close season
Malkin*	3	Kentucky	Hunting jacksnipe in close season
Merrill	1	Illinois	Killing wood ducks
Merrill	2	Illinois	Killing ducks in close season
Perry	2	Mississippi	Killing woodcock and ducks in close season
Perry and Yerger*	2	Tennessee	Hunting ducks in close season
Perry and Yerger*	1	Mississippi	Killing jacksnipe in close season
Ransom	1	Montana	Possessing ducks in storage in close season
Ransom	1	Montana	Possessing freshly killed great blue heron
Shupee	1	Texas	Shipping more than daily bag limit
Smith, C.P.S. and Willis*	1	Iowa	Killing a swan
Steele	1	Washington	Possessing loon breasts and swan skins without permit
Steele	2	Washington	Possessing and offering mounted skins without permit
Visart	1	Arkansas	Possessing ducks in storage in close season

*U.S. Deputy Game Warden

ALASKA DIVISION

The Secretary of Agriculture has authorized the purchase of a gasoline schooner at a cost of \$6,000, to be used by the men at the Reindeer Experiment Station for cruises along the coasts of Bering Sea and the Arctic Ocean to investigate the reindeer herds and to determine the suitability of these coastal regions for reindeer raising.

Mr. Donald Stevenson, Reservation and Fur Warden on the Aleutian Islands, has been authorized to use a boat belonging to natives of the islands, loaned to permit him to spend the summer cruising in the western part of the Aleutian Chain to determine the suitability of these islands for reindeer raising, grazing, and fox farming. The characteristics of these islands are little known and this reconnaissance is expected to have very practical results. During the last of May and continuing into June Mr. Stevenson has been making a survey of

Unimak Island, the easternmost of the Aleutians, to determine the number and distribution of the caribou there and its grazing possibilities.

Mr. O. J. Murie, Assistant Biologist and Fur Warden, has been engaged since April 21 in studying the distribution and habits of the caribou on the Upper Tanana River, where also he plans to spend some time trying to secure specimens of the big grizzly bears on the slopes of the Alaskan Range.

A very marked decrease is being noticed in the number of furs being shipped out of Alaska this season as compared with the same period last year.

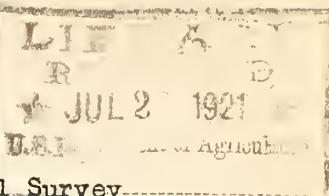
Three permits to propagate martens in Alaska have been issued to residents of the Territory--two of them for experiments on islands. These will be watched with considerable interest particularly by other residents contemplating going into the fur-farming business.

Game Warden Ray C. Steel, of Eagle, Alaska, has reported the conviction of a trapper near the Canadian boundary line on Fortymile River, who had taken eighteen martens from Alaska and sold them in Canada; a fine of \$100 and costs was imposed, totaling \$190. It is unlawful to trap either martens or beavers in Alaska at any time.

Mr. Eddie Berkley, stationed at Wrangell, Alaska, has resigned as deputy fur warden, effective May 31.

Admiralty Island, Alaska, appears to be so well suited to the needs of mountain goats that the Boone and Crockett Club has maintained a fund for several years with a view to capturing stock and introducing it on this island. In April, three Indians made an effort to secure some of these interesting animals but were able to take only a single individual, and this was transported so far that it did not survive. Goats exist in such large numbers in the mountain ranges of southeastern Alaska that more systematic efforts will be made next year with a good prospect of success.

THE SURVEY



Monthly News Bulletin of the Bureau of Biological Survey
United States Department of Agriculture

Vol. 2.

Washington, D. C., July, 1921.

No. 7

THE SURVEY is issued for office and field men of the Biological Survey under authorization of the Chief of Bureau as a medium for furnishing information regarding the work of the Bureau, movements of the staff, changes in assignments, and news and personal items of importance, with a view to increasing the interest of the personnel in the work of the Bureau as a whole and in each one's individual work as related to it. It is intended primarily for employees and is not in any sense a publication.

GENERAL NOTES

At the meeting of the administrative organization of the Government on June 29 in the auditorium of the Interior Department Building, called by Gen. Charles G. Dawes, recently appointed Director of the Budget, the Biological Survey was represented by Dr. Nelson, Mr. Henderson, and Mr. Thompson. President Harding introduced the Director to the gathered officials, comprising members of the Cabinet, bureau chiefs and their assistants, and heads of independent Government establishments. Mr. Dawes, who was one of the leading bankers of Chicago comes to Washington to supervise the finance system recently established by act of Congress, under which all appropriations will be passed upon by the Bureau of the Budget. It was to secure the cooperation of all offices of the Government, large and small, in scaling down expenditures under the amounts already authorized for the present fiscal year and also the estimates for the coming fiscal year, that the meeting was held. The present situation calls for the same kind of patriotic service on the part of Government employees to help the Government save, and thus lift the burden of taxation from the backs of the people by reducing the cost of government, as was elicited during the war, when every effort was put forth to assist in bringing victory to our cause. The present financial stress is one of the results of the war and should be met by our people in the same spirit as that which characterized our efforts while the war was on.

The Biological Survey, along with all other bureaus of the Government, will assist in the scaling down process, doing its utmost to cooperate in carrying out the wishes of the President by practicing rigid economies in accordance with plans set forth by the Director of the Budget. To make the Bureau's efforts a success every employee is being counted upon to cooperate by having constantly in mind the need for economy in saving every dollar possible, not only in large ways, but in such of the smaller ways as preventing waste of stationery, pencils, etc., in a more careful use of the telephone and telegraph, and in practicing other economies, many of which though small will effect in the aggregate a gross saving of astonishing size. It is trusted that all employees of the Bureau will take this

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July, 1921.

matter seriously, in the spirit desired by the President and the Director of the Budget, and thus feel it a personal call not only to help reduce expenditures but to bring about a greater return for the expenditures actually made.

An interdepartmental committee has been appointed to cooperate with the Director, on which the Department of Agriculture is represented by Assistant Secretary Ball. Within the Department Mr. Henderson, Assistant Chief, represents this Bureau. The Secretary has called for the submission of the 1923 estimates on August 1, which is a month earlier than in former years.

Dr. Bell has been designated to represent this Bureau in conferences called by Assistant Secretary Ball, looking toward the provision of better facilities for men within the Department to take advanced courses of study along the lines in which they are working. It is the plan, as thus far developed, to enable employees not only to improve their education but at the same time the quality of their services to the Government.

During the coming fall the Bureau will be more fully represented by exhibit material at western fairs than formerly. Present plans call for a cooperative exhibit in which the Biological Survey, the Forest Service, the Bureau of Public Roads, and possibly other Bureaus of the Department will participate.

The following publications of the Bureau were issued in June: Service and Regulatory Announcement, B. S. 40, "Migratory Bird Treaty, Act, and Regulations," including amendments of May 17, 1921; pp. 12, issued June 6, 1921.

Service and Regulatory Announcement, B. S. 41, "Regulations for the Aleutian Islands Reservation, Alaska"; pp. 4, issued June 25, 1921.

Poster No. 40, "Open Seasons for Game, 1921", by George A. Lawyer and Frank L. Earnshaw; issued June 30, 1921 (actual date of receipt, July 6, 1921).

In addition to these Bureau publications, the following report was issued, June 16, 1921: "Lower California and Its Natural Resources," by Edward W. Nelson; Memoir of the National Academy of Sciences, vol. 16, part 1, pp. 194, pls. 35, including a map of life zones of the Peninsula. The first paragraph describes its connection with this Bureau: "The present account of Lower California has been prepared as one of the results of an expedition from the Bureau of Biological Survey of the United States Department of Agriculture, which traversed the entire peninsula during 1905 and 1906 under my direction, assisted by Mr. E. A. Goldman."

Among manuscripts submitted in June for approval for outside publication were the following:

Gabrielson, Ira N., "Controlling Rodent and Other Small Animal Pests in Oregon," for Extension Service, Oregon Agricultural College.

Garlough, F. E., "An Interesting Problem in Poisoning Ground Squirrels in California," for the Journal of Mammalogy.

Lincoln, F. C., "The Migration of Ducks Banded at Lake Scugog, Ontario, during the Fall of 1920," for Proc. Biol. Soc. Washington.

McAtee, W. L., "Food Habits of the Ring-necked Pheasant," for The Auk; and "Ten Spring Bird Lists Made near Washington, D. C.," for the Wilson Bulletin.

July, 1921.

Oberholser, H. C., "Notes on Horsfield's Zoological Researches in Java," for Proc. Biol. Soc. Washington.

Taylor, Walter P., "A Distributional and Ecological Study of Mount Rainier, Washington," and "Lake Maxinkuckee, a Physical and Biological Survey (Evermann and Clark)," both for Ecology.

BIOLOGICAL INVESTIGATIONS

Dr. Walter P. Taylor and Mr. George G. Cantwell are studying the distribution of birds and mammals in the Olympic Mountains, Washington, their headquarters on June 30 being Port Angeles.

Mr. Vernon Bailey is studying the life habits of beaver and muskrats in Wisconsin, this information being much needed in relation to the possible establishment of fur farms stocked with these animals.

Mr. Harold N. Vars has been appointed preparator, effective June 17, to assist Mr. Barrett in the taxidermy shop. He fills the place vacated June 15 by Mr. Charles W. Fowle.

ECONOMIC INVESTIGATIONS

Dr. A. K. Fisher continued his trip of inspection in the Western States during the month. Despite unfavorable economic conditions in many sections he finds the stockmen and farmers generally enthusiastic over the rodent and predatory animal work and an excellent showing being made in the campaigns.

Mr. Lisle Morrison left Washington on June 20 for points in the West to confer with leaders of the various districts with reference to problems of office organization. His first stop was at El Reno, with Messrs. Melton and Pope. He is proceeding by the southwestern route to Sacramento and Portland returning by the northern route through Cheyenne and Denver.

Mr. Frank G. Ashbrook left early in June for an extended trip continuing his investigation of fur farming conditions throughout the Northeastern States, Prince Edward Island and other points in Canada, and westward through Michigan, Wisconsin, and Minnesota. He reports conditions generally very favorable among the fox breeders, with a reasonably good crop of young foxes produced this spring. There is a lively interest on the part of the fox breeders in the work which the Bureau is doing to promote the welfare of the fox raising industry through its investigation of feeding, handling, and housing practices and of diseases to which fur bearing animals are subject when kept in captivity.

Mr. J. S. Ligon has completed his work in the State of Michigan for the time and has returned to Albuquerque, N. Mex. As a result of this work the State Legislature has discontinued the payment of bounties on wolves and coyotes and made provision through an increase of hunting-license

fees whereby \$35,000 to \$40,000 will be made available annually through the Conservation Commission for systematic operations against predatory animals, in accordance with plans which the Bureau has found most effective. On the request of the Conservation Commission that the Biological Survey provide trained leadership, Mr. Ligon will return to Michigan in the near future to give its employees the benefit of his experience in the best methods of destroying these animals, which not only prey upon the deer of the State but prevent the utilization of great areas of cut-over lands for sheep raising, to which they are well adapted. State officials are enthusiastic over the good work accomplished by Mr. Ligon, and the response which they have made in providing cooperative funds and developing plans of operation in accordance with the Bureau recommendations is most gratifying.

Calls have recently been received for the assistance of the Bureau in predatory-animal work from Minnesota, Wisconsin, Indiana, Iowa, Missouri, Louisiana, and Kansas. This shows that interest in predatory-animal control is becoming more widespread as the people become familiar with the important service along this line which the Bureau has been rendering in the Rocky Mountain and Pacific Coast States.

Reports from the field generally show that both the rodent and the predatory animal operations were going strong at the close of the fiscal year and indicate that final returns from the various districts will show that an increasingly large and valuable service has been rendered by the field organization of the Bureau during the year.

Among the notable catches recently reported have been a large old mountain lion taken in the vicinity of Montrose, Colo., by hunter Trickel, and a wily old wolf by hunter George Massey, in Utah.

Effective July first Mr. Leo K. Couch becomes head of the rodent eradication work in the State of Washington, with headquarters at Puyallup. Mr. T. H. Scheffer, formerly in charge of this work, has been transferred to investigational work under the project life habits (including food habits) of injurious animals. Mr. Scheffer will continue investigations started a number of years ago upon the life history and habits of pocket gophers, moles, mountain beavers, and various species of meadow mice, with a view to completing reports on these subjects.

Dr. Glenn R. Bach became leader of the predatory animal work in the State of Washington on July first with headquarters at Olympia. On this date the district formerly consisting of Washington and Oregon, under the leadership of Mr. Stanley G. Jewett, was divided into separate districts. Mr. Jewett will continue in charge of predatory animal operations in Oregon.

Mr. A. E. Gray, in charge of rodent work in Texas, reports that by actual count 670,000 rats have been killed in campaigns this spring. One of the surprising and interesting features of the report is the killing of 253,000 rats in Denton County, in which the human population is 35,000.

July, 1921.

Mr. Louis Knowles, who has been assisting Mr. R. E. Bateman in the predatory animal work in Montana and North Dakota, has been assigned as leader of predatory animal work in South Dakota, effective July 1. He will be at Rapid City.

Mr. Louis B. Thompson, clerk at the Albuquerque office, has been transferred to the Internal Revenue Service, to take effect early in July.

The following appointments from the recently established Civil Service register were made to take effect during June or early in July: Mr. Lawrence C. Whitehead, as assistant to Mr. A. E. Gray, San Angelo, Tex., Mr. John Gatling, Jr., as assistant in rodent work and Mr. E. L. Pineau, as assistant in predatory animal work, to assist Mr. Charles L. Bliss, at Albuquerque, New Mexico, Mr. Edward Rasmussen, as assistant in predatory animal work to Mr. Geo. E. Holman, at Salt Lake City, Utah. Mr. J. Ray Williams, as assistant in rodent work to Mr. Joseph Keyes, at Denver, Colo. Mr. Walter D. Perry, with headquarters at Lincoln, Nebr., assistant to Mr. Albert M. Day, in the Wyoming-Nebraska district. Mr. Victor E. Larse, with headquarters at Bozeman, Mont., to assist Mr. A. E. Oman, in the Montana district. Mr. John Finley, assistant to Mr. W. E. Crouch at Boise, Idaho. Mr. James Silver, with headquarters at Washington, D. C., for field work throughout the Eastern and Southern States. Mr. Merton M. Smith, as clerk to Mr. George E. Holman, at Salt Lake City, Utah. Mr. Charles E. Reno, as assistant to Mr. D. A. Gilchrist, at Phoenix, Ariz. Mr. Otis Wade, as assistant to Mr. B. J. Melton, at El Reno, Okla.

Economic Ornithology

Mr. W. F. Kubichek is in western Colorado investigating the relation of band-tailed pigeons to the cherry crop, with a view to determining whether a permit for their control should be issued under the provisions of the migratory-bird treaty act.

Mr. C. W. Leister, who was with this division in 1920 when he made a study of the relation of bird life to the Japanese beetle in New Jersey, has again joined the force. He will be engaged in laboratory work connected with the reference collection of insects.

MAMMAL AND BIRD RESERVATIONS

Two new bird refuges - the Nine Pipe and Pablo - were created in Montana in June by Executive order, and the Indian Key Refuge, Florida, was enlarged by taking in Bush Key, which harbors a colony of roseate spoonbills, and three smaller keys.

The number of buffalo calves at the National Bison Range in Montana has increased to 50; and eleven antelope fawns are reported at the Wind Cave Game Preserve, South Dakota.

July, 1921,

MIGRATORY BIRD TREATY AND LACEY ACTS

Chief Warden Lawyer spent the first two weeks of June on an administrative trip through a portion of the Middle West, during which he conferred with members of the field force, as well as with sportsmen and others interested in the subject of game protection. On June 2 he addressed a meeting of the Illinois Sportsmen's League, at East St. Louis, Ill., on the subject of game protection, with special reference to the migratory-bird treaty act. He also attended the conference held at the U. S. Biological Station at Fairport, Iowa, called by Secretary Hoover, of the Department of Commerce, where conservation of aquatic resources was discussed; Mr. Lawyer spoke on the migratory-bird treaty act work and the necessity of conserving swamp and marsh areas in the United States if feeding and resting places are to be provided for our wild fowl. On his return from the Middle West he stopped in Columbus, Ohio, where he addressed the Rotary and Kiwanis Clubs on June 14 and 15, outlining to the members the work being done by the Biological Survey in the enforcement of the game laws. On June 23 he addressed a meeting of Delaware sportsmen, at Dover, Del., on the protection of migratory birds.

The following extracts from letters recently received by the Bureau serve to illustrate the character of reports coming from all sections of the country relative to the good results being secured under the migratory-bird treaty act:

Federal Deputy Geo. Neale, of Sacramento, Calif., writes under date of June 6: "The strict observance, with the exception of a few sporadic cases, of the migratory-bird treaty act is working wonders in bringing back several species of migratory waterfowl that the writer had believed were almost exterminated."

Federal Deputy Daye, of Shakopee, Minn., in a letter dated May 23 writes: "Yesterday, while at Spring Lake, Scott County, Minn., I observed 2 teal, 4 bluebills, and 14 black ducks. I spoke to one farmer about the ducks and he told me that it is 13 years since bluebills and black ducks nested on that lake but said twenty years ago many used to nest there. This is due to no spring shooting."

Following is an extract from the biennial report of the Michigan State Game, Fish, and Forest Fire Department: "Ducks, geese, brant, coots, and other migratory waterfowl.-Observance of the flight, 1919-1920, indicates that there has been a general increase of upwards of 100 per cent since the abolishment of spring shooting through the International Treaty. Old time commercial fishermen declare that not in forty years have they observed so many mallard and black ducks on Lake Huron as in 1920."

The following appointments to the position of U. S. Deputy Game Warden, were made during June, raising the total number of nominal-salaried wardens to slightly above 350:

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William H. George, Sublet, Wyo.
 Charles I. Clumpner, N. 1007 Cannon St., Spokane, Wash.
 William R. Crandell, Granite, Oreg.
 Otto M. Jones, 305 Bannock St., Boise, Idaho.
 Charles G. Mihiils, Butler Hotel, S. 219 Lincoln St., Spokane, Wash.
 Edgar A. Lindgren, 1425 E. 69th Pl., Chicago, Ill.
 Irving B. Hazeltine, Canyon City, Oreg.
 Otto W. Plaga, Wheatland, Wyo.
 John W. Kinney, Olympia, Wash.

The appointments of the following U. S. Deputy Game Wardens were terminated:

Edgar Q. Beckwith, 522 Eleventh St., Clinton, Iowa.
 Henry Fox, Mercer University, Macon, Ga.

In the June issue of THE SURVEY the name of Peter Vredenburgh, 138 W. Main St., Freehold, N. J., was included among appointees to the position of U. S. Deputy Game Warden; it should have read that Mr. Vredenburgh's appointment was terminated effective May 15.

Cases Terminated - Reports Received during June.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Arnold*	2	Nebraska	Killing ducks in close season	\$25 each
Barmeier	1	Missouri	Killing geese from powerboat	\$25 and costs.
Barmeier	1	Missouri	Killing ducks in close season	\$200 " "
Barmeier	1	Iowa	Possessing recently killed gull	\$10 " "
Charlton	1	Ohio	Attempting to kill ducks from motorboat	\$25 " "
Charlton	1	Ohio	Possessing ducks and coot in close season	\$25 " "
Farnham and Birsch	7	Georgia	Killing doves in close season	\$20 each and costs.
Hobson*	2	Iowa	Hunting ducks after sunset	\$10 each and costs
Hoffman	1	Alabama	Killing wood ducks	\$5
Holmes	2	Nebraska	Killing ducks in close season	\$5 each

Cases Reported by Wardens for Prosecution, Cont'd.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Ransom	2	Washington	Possessing swan	\$5 each
Smith, B.E.	2	Maine	Offering gull skins for sale	\$5 each
Steele and Antwine*	1	Alaska	Possessing and shipping swan skins	\$30
Vanselow*	1	Illinois	Killing sandpipers	\$12.50 and costs.
Yerger*	16	Mississippi	Killing doves in close season	\$10 each and costs.

Cases Reported by Wardens for Prosecution

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Asmuth	1	Wisconsin	Killing ducks in close season
Barmeier	1	Missouri	Hunting ducks in close season
Barmeier	1	Missouri	Selling and serving ducks to guests
Britton	1	Oklahoma	Killing ducks in close season
Bloxsom and Nottingham**	1	Virginia	Possessing parts of curlew
Charlton	1	Ohio	Possessing dead wild duck in close season
Hoffman	1	Florida	Killing doves in close season
Holmes	5	Nebraska	Killing geese in close season
Kelsay and Shaver	5	Minnesota	Hunting ducks in close season
Merrill	4	Illinois	Possessing ducks in storage in close season
Merrill	1	Indiana	Possessing ducks in close season
Mushbach	3	Montana	Possessing migratory birds and offering same for sale without Federal permit.
Raeth*	1	Wisconsin	Possessing aigrettes for purposes of sale
Raeth*	1	Wisconsin	Selling ducks
Shaver	8	Minnesota	Hunting ducks after sunset
Smittle *	2	Iowa	Killing ducks in close season
Smith, B.E.	2	Maine	Killing gulls

July, 1931.

Cases Reported by Wardens for Prosecution, Cont'd.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Smith, B.E.	1	Maine	Possessing ducks in storage in close season
Smith, C.P.S.	1	Georgia	Selling and purchasing ducks
Whitehead	1	Georgia	Possessing and offering wood ducks for sale
Whitehead and C.P.S. Smith	1	Georgia	Selling and serving ducks to guests
Yerger *	3	Arkansas	Possessing ducks and coots in close season

*U.S. Deputy Game Warden

Judge A. S. VanValkenburgh, of the Western District of Missouri, has imposed several substantial fines for infraction of the migratory-bird treaty act, and recently indicated his desire to command respect for the law by assessing a fine of \$200 and costs against a violator charged with killing a wild duck during the Federal closed season.

ALASKA DIVISION

The Bureau purchased the 40-foot cruiser-type motor boat "Regal," equipped with a 36 horse-power gasoline engine, at Seattle, Wash., in June, for use in inspecting fur farms in Alaska and enforcing the fur laws and regulations. The boat is in charge of Chief Fur Warden Ernest P. Walker, of Juneau. Mr. Walker came to Seattle for it, and, assisted by an engineer and licensed pilot employed for the purpose and by Warden Ray C. Steele, took it under its own power to Alaska. Warden Steele will return to his station at Seattle after the arrival of the boat in Alaskan waters.

Possessing this boat will enable the Bureau to add greatly to the usefulness of its service in building up the fur industry as well as in suppressing illegal traffic in furs. The industry is developing rapidly and with promise of great success on the islands of southeastern Alaska. All but one of the ten islands under the jurisdiction of the Biological Survey have now been leased for fox-farming purposes. Most of the islands in this region are within national forests, and on these, permits are issued by the Forest Service. A plan of cooperation has been worked out between the Survey and the Forest Service whereby the expert knowledge of this Bureau will be made available in helping build up the fur farming industry on the forest reservation islands as well as on those directly under the control of the Biological Survey.

An interesting feature of fur farming in the Territory has to do with experiments in raising martens; for which an additional permit was issued in June, bringing the total thus far issued for these valuable fur bearers to four.

THE SURVEY

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Washington, D. C., August, 12, 1921.

No. 8.

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GENERAL NOTES

The body of Douglas Clifford Mabbott, the only member of the Biological Survey to leave the Bureau for service in the War with Germany who was killed in action in France, was interred with appropriate ceremonies in Arlington National Cemetery, July 21, 1921. Mr. Mabbott was an assistant biologist in the Bureau from December 1, 1915, to the time of his enlistment in the Marine Corps on February 1, 1918. His training was at Paris Island, S. C., where he qualified as an expert rifleman. On May 7, 1918, he landed in France, and was one of the first body of replacements for the 6th Regiment of Marines in their heroic but costly repulse of the German drive on Paris. The battles in which he participated were the capture of Hill 142, Bouresches, and Belleau Wood, and the Soissons and St. Mihiel offensives. He was in actual combat almost continuously from June 11, was slightly wounded on July 19, and was killed in action at Bois de Montague on September 15, 1918. His body was buried at the village of Xamme, near Thiaucourt, and remained in France until brought to the United States with many others, arriving in New York, July 15, 1921. Of more than 220 interments at Arlington on July 21, three were of marines of the 6th Regiment, of which Mr. Mabbott was so gallant a member. The Marine Corps was represented at the Services by General Harry Lee, a major, and a sergeant, and the ceremonies were conducted by Service Chaplains, a band, and a firing squad. Members of the Biological Survey attending were Messrs. W. L. McAtee, L. L. Buchanan, E. R. Kalmbach, H. L. Viereck, T. S. Palmer, Alexander Wetmore, and Joseph Silver, and Mrs. Elliott. Mr. Mabbott's father, Mr. Geo. C. Mabbott, of Unity, Wisconsin, and a number of friends also were present. The Biological Survey is well satisfied with Mr. Mabbott's accomplishments while in its employ, the chief results of which are embodied in Department Bulletin 862, "Food Habits of Seven Species of American Shoal-water Ducks," and is proud of his record in the hard-fighting Marine Corps. The whole Fourth Brigade including Mr. Mabbott's regiment, the 6th, was cited in Army Orders by General Petain for their heroic efforts in Bouresches and Belleau Wood; this entitled all its members to wear the fourragere, a coveted symbol of valor.

In this connection it is of interest to note that Carl Olin Minor, who was furloughed on July 31, 1918, from the position of stenographer in the Biological Investigations Division for military service, and who died in camp at Blacksburg, Va., on October 23, 1918, is also interred at Arlington, in the section next to that in which Mr. Mabbott now lies.

Plans for next season's exhibits on fair circuits include a cabinet of mounted birds that are frequently shot in violation of the Migratory-Bird Treaty Act. This cabinet will contain the following birds: On one side, game birds - bartramian sandpiper, curlew, willet, and male and female wood duck; on the other side, insectivorous birds - meadowlark, flicker, nighthawk, purple martin, and red-headed wood-pecker. It is planned to construct the exhibit from specimens seized by wardens or collected by other representatives of the Bureau. Wardens arresting persons having such birds in possession, and other employees holding scientific collecting permits, are therefore urged while engaged in field work to bear this in mind; as the exhibit will be built up in series of five, a number of specimens of each bird listed may be sent in. These specimens may be skinned, salted, and shipped to the office, where they will be mounted by Mr. Barrett, the taxidermist. In this way the exhibit may be prepared at a nominal cost.

The 1920 Yearbook of the Department of Agriculture made its appearance on July 28, and contains four articles contributed by the Biological Survey, which aggregate 64 pages, containing 59 illustrations. It is hoped to have these articles available in separate form in the near future, to permit their distribution where useful, as this would not otherwise be possible because of the cost of the complete publication and its limited edition. The Biological Survey's contributions were as follows:

Y. B. Sep. 836, "Conserving Our Wild Animals and Birds," by Edward A. Goldman; pp. 159-174, 16 ills.

Y. B. Sep. 843, "Farm Help from the Birds," by W. L. McAtee; pp. 253-270, 16 ills.

Y. B. Sep. 845, "Hunting Down Stock Killers," by W. B. Bell; pp. 289-300, 10 ills.

Y. B. Sep. 855, "Death to the Rodents," by W. B. Bell; pp. 421-438, 17 ills.

Among manuscripts submitted in July for approval for outside publication were the following:

Preble, Edward A., "Cassin's Kingbird in Montana," for The Condor.

Stevenson, Donald H., "Bob, Grizzly of the Thorofare," for Outdoor Life.

Taylor, Walter P., "The Yellowstone Elk," for Science Service.

Assistant Chief and Mrs. Henderson have the sympathy of the Bureau in the death, on July 25, of Mrs. Henderson's father, Mr. Fletcher Orpin, who made his home with them.

Mr. Louis Klein, who was in charge of the Bureau mails and files from 1913 to the time of his resignation in March, 1920, was reinstated August 1, to resume his old duties.

BIOLOGICAL INVESTIGATIONS

Early in July, Mr. F. C. Lincoln was detailed to carry on experiments in trapping and banding wild ducks on their breeding grounds, in a cooperative undertaking with Dr. J. C. Phillips, of Boston, Massachusetts. The work was begun near Napoleon, North Dakota, where it seemed that conditions might prove favorable.

Mr. Theo. H. Scheffer, who has been assigned to work under the direction of this Division, is continuing observations on the habits and life histories of the mountain beaver and the pocket gopher in the vicinity of Puyallup, Washington.

Dr. Walter P. Taylor, who, with Mr. George G. Cantwell, is working out the distribution of birds and mammals in the Olympic Mountains, Washington, reports success in this work, though investigations in the higher altitudes have been somewhat hindered by heavy snow.

August, 1921.

ECONOMIC INVESTIGATIONS

Dr. Fisher and Mr. Morrison, who have been making extensive trips through the West holding conferences with the members of the field force, cooperators, and others interested in our work, returned to Washington the latter part of July and are now busily engaged in reestablishing connection with the work that has been in progress in the Washington office and in rounding into shape to be put into effect the many suggestions that have come to them during this period of direct contact with the field organization and work.

The Division wishes to express appreciation of the promptness and completeness of reports which have been received covering the investigational work and field operations. It is a matter of interest and gratification to all to know that the summary shows a larger number of predatory animals taken and a greater acreage treated for the eradication of rodent pests than during the preceding year, despite decreased amounts available from Federal appropriations and cooperative sources. This is a particularly encouraging showing as results indicate more thorough organization and efficient conduct of the work as well as a reduced cost of operation. This gives further ground for the belief that by giving due attention to the possible reduction in operating costs we can carry forward during the coming year a larger program than has been possible during any period in the past, even in face of the necessity confronting Federal, State, and private agencies of a further reduction of expenditures to a minimum consistent with the effective conduct of business.

Project agreement providing for cooperative work against predatory animals has recently been completed and approved by the State officials of Colorado, Utah, and Montana. The agreement with the State Department of Agriculture of Utah came near being destroyed while on its way to Washington by a fire which occurred in a mail car near Sterling, Ohio, July 26. Fortunately the project agreement and the letter of transmittal were only slightly scorched.

Headquarters for Dr. Glenn R. Bach, in charge of predatory animal work, and Mr. Leo K. Couch, leader of the rodent work, in the Washington district have been established in the State Capitol, Olympia, Wash., suitable office space being furnished by the State Department of Agriculture.

Mr. Frank G. Ashbrook continued his study of fox farms in Michigan, Wisconsin, and Minnesota, and at Winnipeg and other points in Canada, during July.

It is with regret that we learn of the death of the infant son of Mr. and Mrs. R. E. Bateman.

Mr. James Silver, who was for a number of years in the employ of the Bureau and was at the time of his resignation in 1919 leader of the rodent eradication work in Colorado, returned to the Bureau service July 16. His general headquarters will be at Washington, D. C., but he will be engaged in work against rodent pests throughout the eastern United States. He is now attending a series of extension service conferences in Alabama, Mississippi, and Louisiana with a view to ascertaining rodent conditions and advising as to practical procedure to be followed in meeting the situation in these States. He will confer with extension service officials in a number of other States on his return.

FOOD HABITS RESEARCH.
(Formerly Economic Ornithology.)

Owing to its increased activities in the study of the food habits and economic status of reptiles and batrachians and in the laboratory examination of stomachs of mammals, the name of the former division of Economic Ornithology has been changed to Division of Food Habits Research. Effective July 1 this office became a distinct division of the Bureau with Mr. W. L. McAtee in charge. Work in economic ornithology, however, will still constitute the greater portion of the activities of the division.

Mr. C. C. Sperry has completed his investigation of the relation of robins to the cherry crop in Oregon. He reports finding only moderate damage this year. Enroute to Washington he is spending a few days of vacation in California and Kansas.

Mr. W. F. Kubichek has completed a study of the relations of band-tailed pigeons and other birds to cherries in Colorado. Magpies were found to be the chief offenders.

Messrs. F. P. Metcalf and W. F. Kubichek are now engaged in a survey of the wild-duck foods of Minnesota lakes. A Ford truck will be used in carrying the party and equipment from place to place and it is thought that a considerable reduction in transportation expenses will result.

GAME AND BIRD RESERVATIONS.

Swans have frequently been seen on the two new refuges, Nine Pipe and Pablo. Early this spring and summer several flocks rested on one of the reservoirs and one flock of about 200 was seen in April. The swans were seen several times in June.

MIGRATORY BIRD TREATY AND LACEY ACTS.

Chief Game Warden Lawyer attended and addressed the annual meeting of the Minnesota Game Protective League at Gull Lake, Minn., July 14 and 15. On his return trip he stopped at Chicago, Indianapolis, and the Kankakee River section for a few days on matters in connection with the enforcement of the Migratory Bird Treaty and Lacey Acts. The Kankakee River bottoms, which have been drained with a view to reclaiming them for agricultural purposes, formerly comprised one of the greatest wild-fowl breeding resorts and hunting sections in the country; unfortunately, not only has the effort to reclaim the land for agricultural purposes been a failure in many instances but drainage of the area has destroyed its usefulness as a wild-fowl resort.

Annual reports from deputy game wardens, which are submitted under date of June 30 of each year and are steadily coming in, indicate that there has been a marked increase in practically all species of migratory game birds throughout the country. Many of the reports show increases also in nongame and insectivorous birds.

Park,

Capt. B. J. Pacetti, U. S. Game Warden, at Ponce, Florida, has our sympathy in the death on August 2 of his only daughter.

The following appointments to the position of U. S. deputy game warden were made during July:

B. E. Bucknell, Decorah, Iowa.
 Richard L. Allston, P. O. Box 332, Georgetown, S. C.
 William S. Cochran, 614 S. 9th St., Fort Smith, Ark.
 W. A. Spencer, 1402 Monterey St., San Antonio, Tex.
 Cecil R. Bowers, 34 Villa Route, Charleston, W. Va.
 Oscar A. Gerner, Savanna Proving Ground, Savanna, Ill.
 Edwin Jennings, Savanna Proving Ground, Savanna, Ill.

Cases Terminated - Reports received during July.

<u>Warden.</u>	<u>Cases.</u>	<u>State.</u>	<u>Violation.</u>	<u>Fine.</u>
Babson*	1	Massachusetts	Killing turnstones	\$5
Babson*	1	Massachusetts	Killing grebe	\$1
Barmeier	2	Iowa	Hunting ducks in close season	\$10 each and costs
Birsch	1	Alabama	Offering aigrettes for sale	\$25
Birsch	1	Alabama	Selling mourning doves	\$25
Birsch	1	Maryland	Illegal transportation of ducks	\$50 and costs
Bloxson	1	Maryland	Killing bluebird	\$10 and costs
Bloxson	1	Maryland	Attempting to kill snipe in close season.	\$5 and costs
Bloxson	1	Maryland	Killing ducks in close season	\$5 and costs
Bloxson	1	Virginia	Killing heron	\$5
Bloxson and C.P.S. Smith	1	Virginia	Selling wild ducks	\$10
Charlton	1	Ohio	Possessing ducks in storage during close season	\$10 and costs
Charlton	1	Ohio	Killing coot in close season	\$10
Concannon*	2	Kansas	Killing ducks in close season	\$1 each and costs
Concannon*	2	Kansas	Killing ducks in close season	\$1 each
Concannon*	1	Kansas	Killing ducks in close season	\$10
Hoffman	1	Alabama	Killing insectivorous birds	\$10
Holmes	2	Kansas	Killing ducks in close season	\$1 each and costs
Holmes	1	Iowa	Shipping dead heron	\$10 and costs



Cases terminated - Reports received during July - Cont.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Holland*	1	Kansas	Killing ducks during close season	\$5 and costs
Merrill	3	Illinois	Possessing ducks in storage during close season	\$25 each and costs
Merrill	1	Illinois	Killing flickers	\$25 and costs
Ransom	4	Washington	Possessing ducks in storage during close season	\$5 each
Shupee	1	Texas	Killing robins	\$5
Smith, C.P.S.	1	Virginia	Shipping woodcock for purpose of sale	\$10
Smith, C.P.S.	1	Iowa	Selling mounted ducks without permit	\$10 and costs
Stadlmeir	1	Ohio	Purchasing wild ducks	\$25 and costs
Stadlmeir	1	Massachusetts	Possessing ducks without Federal permit	\$1
Stadlmeir and Lowe*	1	Massachusetts	Killing dowitchers	\$10
Stadlmeir and Seaman*	1	Massachusetts	Killing sandpipers	\$10
Stadlmeir, Steele* & Bemis*	2	Massachusetts	Killing sandpipers	\$10 each
Steele*	1	Massachusetts	Hunting ducks from sailboat	\$1
Steele* & Grant*	1	Massachusetts	Killing sandpipers	\$10
Wheeler*	1	Massachusetts	Killing sandpipers	\$1

* Deputy warden.

ALASKA DIVISION.

Customs officials of Seattle, Wash., seized eight beaver skins from two passengers arriving at Point Wells from Alaska, on July 14. The boat was supposed to come direct to Seattle without stopping, but the vigilant agents of the Customs Service, learning that it would stop at Point Wells to permit a few passengers to disembark, proceeded to that point and upon searching the passengers' baggage discovered the beaver skins.

Dr. John C. Corl, of West Raleigh, N. C., has been appointed Veterinarian, in Alaska Reindeer Investigations, effective July 16, succeeding in this position Dr. Geo. F. Root. After spending the last two weeks in July familiarizing himself with administrative matters and receiving instructions regarding his duties, Dr. Corl left for Seattle, Wash., on the evening of July 31, to board a vessel bound direct for Saint Michael, Alaska. His headquarters will be at Unalakleet, where the reindeer experimental station is located, and he will act as an assistant to Dr. Hadwen, Chief Veterinarian.

August, 1921.

Chief Fur Warden Ernest P. Walker, arrived at ~~Juneau~~, Alaska, on July 11 at 3:20 p.m., after a very successful trip from Seattle, Wash., in the Bureau's new boat, the "Regal." Upon reaching Seattle, he engaged a master and pilot in the person of Mr. Kenneth Talmage, of Wrangell, Alaska, and, accompanied by U. S. Game and Fur Warden Ray C. Steele, of Portland, Ore., left Seattle with the boat at 10:35 a.m., July 3. The boat will be used in enforcing the fur law and regulations and in inspecting fur farms in southeastern Alaska.

Mr. O. J. Murie, Biological Assistant, has returned to Fairbanks after a trip of several months duration along the Upper Yukon River and about the headwaters of the Tanana. The trip was for the purpose of making a reconnaissance of the migratory caribou herds of that region and to get information concerning conditions relating to other game and fur-bearing animals. Travel was mainly by dog sled and much of it was under extreme winter conditions, with temperatures falling to 60 degrees and more below zero. Valuable knowledge was gained concerning the wild life of a region about which there was formerly practically no definite information available.

About the last of June, Mr. L. J. Palmer and Dr. Seymour Hadwen left St. Michael on the power schooner "Hazel," purchased for investigations connected with the work of the reindeer experiment station of the Bureau located at Unalakleet. The first trip was to visit Nunivak and Nelson Islands and the adjacent coastal region south of the mouth of ^{the} Yukon, to study reindeer conditions and the reindeer herds in that region. Later on trips will be made to more northern points along the coast.

Mr. Herbert W. Johnston, one of the grazing experts of the reindeer experiment station at Unalakleet, left St. Michael about the last of June also, and proceeded into the interior for the purpose of making a reconnaissance of grazing conditions in the Yukon and Tanana River valleys. When last heard from he had reached Fairbanks, where he met Mr. Murie returning from his extended trip.

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L. S. D. Agriculture

THE SURVEY

Monthly News Bulletin of the Bureau of Biological Survey
United States Department of Agriculture

Vol. 2.

Washington, D. C., September 15, 1921.

No. 9.

THE SURVEY is issued for office and field men of the Biological Survey under authorization of the Chief of Bureau as a medium for furnishing information regarding the work of the Bureau, movements of the staff, changes in assignments, and news and personal items of importance, with a view to increasing the interest of the personnel in the work of the Bureau as a whole and in each one's individual work as related to it. It is intended primarily for employees and is not in any sense a publication.

GENERAL NOTES

It is with deep regret that the Biological Survey makes a record of the fact that both of its boys who participated in actual combat in the War with Germany were killed. In the last issue was a notice of the career, death, and interment at Arlington of Douglas C. Mabbott. The week following the payment of final honors to him, members of the Bureau stood in the same National Cemetery at the grave of Major Lyman C. Ward, who was their associate from April, 1906, to October, 1912. Major Ward was born in North Dakota in 1890, and came to the Bureau as a messenger 16 years later. He was hard working and extraordinarily efficient, and was promoted three times during his term of service. Simultaneously with his official work he kept up a course of study and thus prepared himself for college. On leaving the Survey he entered the University of Wisconsin, where he earned his expenses and made an enviable reputation in his studies, in his organization and management of a students' employment bureau, and in military training. As an honor graduate in the military branches, he was offered a lieutenancy in the regular army and began drilling recruits at the very outbreak of the war in the vicinity of New York City, where he was employed with the Appleton Company. He attended the first officer's training camp at Fort Oglethorpe and won a commission as captain. After training a number of companies at Camp Jackson he went overseas with the 324th Infantry. In war as in peace he was an outstanding personality, and was promoted to the grade of major for efficiency and gallantry in action. This commission took effect November 1, 1918, and on November 9, only two days before the armistice was signed he was fatally wounded. He was posthumously cited for valor by Marshal Petain, Commander-in-Chief of the Armies of the East. The citation read: "An officer of remarkable bravery. At the head of his battalion he captured the enemy positions in the woods of Manheuiles and Haudiomont to a depth of two kilometers. Protected the right flank of the 161st Brigade and the left flank of his regiment. Died on the field of honor." At the interment at Arlington National Cemetery on August 5, 1921, the Biological Survey was represented by Mrs. Elliott, Miss Milligan (formerly with the Bureau), and Messrs. F. L. Earnshaw, T. S. Palmer, A. K. Fisher, W. L. McAtee, E. R. Kalmbach, and A. P. Weinerth.

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The Department of Agriculture proposes to establish this fall, 1921, an unofficial system of advanced instruction in certain scientific and technical subjects relative to the work of the Department, in which adequate instruction is not otherwise available in Washington. This matter has been the subject of much consideration on the part of the committee assigned to the task of working out practical plans of procedure and suggested courses to be offered. It is believed that those who may be able to avail themselves of the opportunity thus afforded will both enrich themselves and enhance the value of the service they render. The subjects offered will be confined to those which are fundamental to the science of agriculture and essential to the successful prosecution of the research work of the Department. Plans are being developed also with a view to affording facilities to field employees whereby they may increase their technical knowledge and ability. Dr. Bell represents this Bureau on the committee in charge.

Assistant Chief Henderson, during the course of an automobile vacation trip in Maine, in August, had opportunity to visit and make report on the York fox ranch at Rangeley. He was much interested in observing the foxes, their condition, and their pens, and in studying the ranching practices, feeding methods, and general care of the stock on this successful ranch.

The following publication of the Bureau was issued in August: Farmers' Bulletin 1235, "Game Laws for 1921," by George A. Lawyer and Frank L. Earnshaw; pp. 80, title-page illustration of canvas-back ducks by Robert J. Sim; issued August 13, 1921. The first edition of 100,000 copies was quickly exhausted and a second edition of similar size is being run.

Among manuscripts submitted in August for approval for outside publication was an article by A. H. Howell, entitled "An Egret (Herodias egretta) on Long Island," for The Auk.

In The Survey for August, an appeal was made to Federal wardens and others to supply certain seized birds to be mounted for next season's exhibits on fair circuits. The necessary number of willets has been supplied. Upland plovers, curlews, and male and female wood ducks are still needed. Specimens should be skinned and salted before shipping, and no attempt should be made to ship them any distance in the flesh, particularly in hot weather. Several lots not properly prepared were received in bad condition.

BIOLOGICAL INVESTIGATIONS

Mr. E. A. Goldman left Washington the night of August 29 for the Wichita National Forest and Game Preserve, Oklahoma, where he will investigate conditions affecting the various kinds of game on the reserve. During his absence Dr. Hartley H. T. Jackson will be acting in charge of Biological Investigations.

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Mr. Edward A. Preble, who has been confined to his bed during the entire month of August with inflammatory rheumatism, has been greatly missed from the Division. His many friends are pleased to hear of a slight improvement in his condition during the last few days.

Mr. A. H. Howell is continuing a revision of the chipmunks (genus *Eutamias*); he has completed his study of the largest three groups *E. minimus*, *E. amoenus*, and *E. quadrivittatus* (the last including *cinereicollis*, *bulleri*, *speciosus*, and related forms). The first of these contains about 13 forms, the second 11, and the third 18.

Dr. Edwin M. Hasbrouck, who was on temporary appointment as technical assistant for work on the Biological Survey mammal collection, has resigned to accept a position as medical inspector in the Bureau of War Risk Insurance.

Dr. Walter P. Taylor and Mr. George G. Cantwell in their biological investigations in the State of Washington have started on a trip from near the eastern base of the mountains, across the summit to the Pacific coast side.

Mr. and Mrs. Vernon Bailey have been studying the habits of beavers in northwestern Wisconsin during July and part of August, and are now in the Adirondack Mountains, New York, making further studies of this species. They expect to return to Washington early in the autumn.

Mr. A. H. Howell, during a vacation trip by auto saw about 90 different species of birds, including such rarities as an egret and several least terns on Long Island.

Miss May T. Cooke attended summer school at Cornell University, at Ithaca, New York, in July and August, taking courses in ornithology.

Mrs. Jane S. Elliott left Washington on August 31 to attend an art school in Chester County, Pennsylvania, where she intends to devote her attention to sketching.

Mr. Frederick C. Lincoln returned to Washington on the first of the month from North Dakota, where he has been doing field work connected with banding waterfowl during summer months. He found the lake country of North Dakota suffering from a two years' drought, with the result that some lakes were entirely dry and others reduced to alkaline mud flats. Lucks were therefore not plentiful, but a successful trap was developed for use on future duck-banding trips. He visited lakes in the vicinity of Napoleon, Turtle Lake, Devils Lake, and Hankinson. From August 24 to 26 Mr. Lincoln was detailed to visit the camp of the Girl Scouts of the District of Columbia, at Edgewood Arsenal, Maryland, to lecture on birds, especially on bird-banding. He reports a most instructive experience in visiting Edgewood, which is the arsenal and laboratory of the Chemical Warfare Service.

1. The first step in the process of socialization is the family. The family is the primary socializing agent. It is the first place where a child learns about the world and the people in it. The family provides a child with a sense of security, love, and belonging. It is where a child learns basic social skills such as sharing, cooperation, and communication. The family also instills values and beliefs that will guide a child's behavior throughout their life. The family is a key factor in determining a child's social development and future success.

2. The second step in the process of socialization is the peer group. The peer group is a group of individuals of the same age and social status. It is where a child learns to interact with others and form relationships. The peer group provides a child with a sense of belonging and acceptance. It is where a child learns to negotiate, compromise, and solve problems. The peer group is a key factor in determining a child's social development and future success.

3. The third step in the process of socialization is the school. The school is a formal educational institution that provides a child with knowledge and skills. It is where a child learns to read, write, and do math. It is where a child learns to think critically and solve problems. The school also instills values and beliefs that will guide a child's behavior throughout their life. The school is a key factor in determining a child's social development and future success.

4. The fourth step in the process of socialization is the community. The community is a group of people who live in the same area. It is where a child learns to interact with people from different backgrounds and cultures. It is where a child learns to respect and appreciate diversity. The community is a key factor in determining a child's social development and future success.

5. The fifth step in the process of socialization is the media. The media includes television, movies, and the internet. It is where a child learns about the world and the people in it. The media provides a child with a sense of entertainment and information. It is where a child learns to analyze and interpret information. The media is a key factor in determining a child's social development and future success.

6. The sixth step in the process of socialization is the workplace. The workplace is where a child learns to work and contribute to society. It is where a child learns to be responsible and accountable. It is where a child learns to work with others and solve problems. The workplace is a key factor in determining a child's social development and future success.

7. The seventh step in the process of socialization is the government. The government is where a child learns about the rules and regulations of society. It is where a child learns to be a citizen and participate in the political process. It is where a child learns to respect and appreciate the rights of others. The government is a key factor in determining a child's social development and future success.

8. The eighth step in the process of socialization is the world. The world is where a child learns about the global community. It is where a child learns to respect and appreciate the diversity of cultures and beliefs. It is where a child learns to be a global citizen and contribute to the world. The world is a key factor in determining a child's social development and future success.

ECONOMIC INVESTIGATIONS.

Mr. James Silver, who is engaged in rodent eradication work in the Eastern States, with headquarters at Washington, D. C., attended extension service conferences in Mississippi, Alabama, and Louisiana during August. He obtained much valuable information regarding conditions of rat infestation in these States and laid preliminary plans for developing effective measures for the destruction and control of rats and mice. On his return trip to Washington he conferred with extension service officials in Tennessee, Kentucky, and West Virginia. Much interest has been shown in campaigns against house rats and mice, and also against pine mice, and the prospects are that Mr. Silver will have a very full schedule of work in the Eastern States.

Mr. Frank G. Ashbrook returned August 6 from an extended trip studying fox ranching practices in Canada and the northern United States. He visited sixty important fox farms and held numerous conferences with officials and others interested in the production of silver foxes and other fur bearers. Information of value was gained in reference to the present practices in feeding, handling, housing, and general management of foxes.

Dr. Karl B. Hanson shows in his annual report that most important progress has been made on the U. S. Experimental Fur Farm during the year in the study of diseases to which foxes and other fur bearers are subject when kept in captivity, and also in improving methods of treatment for the control of such diseases, and in determining many important features regarding the normal physiology of fur bearers, such as temperature and normal pulse and respiration rates.

Mr. J. Stockley Ligon has been engaged in further study of predatory animal conditions in Missouri and Iowa and in determining procedure that should be practicable in meeting the situation in these States. This work was undertaken while on his return journey to Michigan, where he will continue for a time to assist State officials in organizing and conducting extended predatory animal campaigns.

Extended leave has been granted Messrs. A. W. Moore, of the Arizona district, and E. E. Horn, of the Oregon district, in order that they may continue their college courses, the former at the Oregon Agricultural College, Corvallis, Oreg., the latter at Leland Stanford University, Calif.

Mr. Ray T. Jackson, who was for several years in charge of the rodent eradication work in Wyoming and Nebraska, has been reappointed, effective October 1, to take up work in Oregon. The bureau staff are glad to welcome him once more as one of their number.

Mr. George P. Hoekendorf was appointed clerk on July 9 to assist in the office at Billings, Mont.

Mr. Benj. E. Foster has accepted appointment as biological assistant in the Arizona district to assist Mr. Gilchrist, effective September 1.

THE SURVEY

FOOD HABITS RESEARCH

The overcrowded condition of the Bureau's offices in the Bieber Building necessitated the moving of the offices and laboratory of the Division of Food Habits Research to wing 1 of Building F, located east of the New National Museum. Here the new accommodations include six office rooms and two storage rooms. While still somewhat crowded, owing to the small size of the rooms, there doubtless will be chance later on to secure additional space in this building.

Mr. W. L. McAtee is attending the National Rifle Matches as a member of the District of Columbia Civilian Rifle Team. These matches, held at Camp Perry, Ohio, continue from August 27 to September 22.

Mr. Remington Kellogg will visit Fisher's Island at the eastern end of Long Island Sound during the latter part of September where, through the kindness of Mr. H. L. Ferguson, he will have opportunity to witness the wonderful migration of hawks across that island and at the same time to secure specimens for the stomach collection.

Mr. C. C. Sperry has returned from his investigation of the relation of robins to small fruit in Oregon. The damage this year was not so bad as two years ago when complaints were frequent. During the latter part of September he will work on the problem of the pinon jay in Colorado.

GAME AND BIRD RESERVATIONS

The Secretary of Agriculture issued an order on August 23 permitting the shooting of migratory wild fowl during the legal open hunting season on the recently established Nine-Pipe and Pablo Bird Reservations in western Montana. The principal benefit to be derived from these reservations is in safeguarding the wild fowl occupying them during the breeding season. Opening them to wild-fowl hunting and practically making them public shooting grounds during the open season is in line with the policy of the Department to develop a great system of breeding refuges for wild fowl which may be utilized for hunting in the open season where the two can be combined without serious detriment to the future of the birds.

MIGRATORY BIRD TREATY AND LACEY ACTS

Chief Warden Lawyer, assisted by Warden Bloxson, patrolled the marshes near Ocean City, Maryland, on October 16, the opening of the Federal season for shooting shorebirds in the State. They succeeded in apprehending nine violators, who are charged with killing individuals of the protected species of shorebirds.

Warden Hilliard reports under date of August 9 that never before has he seen more black ducks than while cruising about the meadows in the vicinity of West Creek and Mill Creek in New Jersey.

Warden Kelsey sends to the Bureau the following press report: "Napoleon, N. D., Aug. 11--Thousands of wild ducks, forgetting their fear of civilization, are entering towns and barnyards seeking water. They are dying by hundreds, owing to the drouth in Logan county."

The following appointments were made to the position of U. S. Deputy Game Warden during the month of August:

John E. Brown, Richland, Wash.
 William A. Francis, Kingston, Ohio.
 Robert W. Schulze, 5420 South Artesian Ave., Chicago, Ill.
 R. M. Spillman, Evansville, Miss.
 Leon G. Briscoe, Devine, Texas.
 Alfred E. Denton, Hamburg, Ark.
 William T. Collins, East New Market, Md.
 Harold Sherman, R. D., Rhodesdale, Md.
 Harry L. Applegate, Kosmosdale, Ky.
 Clarence G. Best, 2705 East Walnut St., Des Moines, Iowa.
 Harry A. Fidler, R. D. No. 5, Canton, Ill.

Appointments of the following U. S. Deputy Game Wardens were terminated during the month of August:

James M. Chaffin, Ironton, Ohio.
 John G. Johnson, (Formerly) 112 Lyon St., Grand Rapids, Mich.
 Herman A. Uterman, 753 Jefferson Bldg., Peoria, Ill.

Cases Terminated - Reports received during August.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Birsch	1	Virginia	Selling aigrettes	\$10
Birsch	1	Florida	Selling ducks	\$5
Hoffman	1	Alabama	Killing bull-bat	\$5
Hoffman	3	Alabama	Killing doves in close season	\$5 each
Holmes	2	Nebraska	Attempting to kill ducks during close season	\$5 each
Holmes	1	Nebraska	Capturing and selling sandhill cranes	\$10
Linebaugh	3	Tennessee	Killing doves in close season	\$10 each and costs
Linebaugh	1	Kentucky	Killing heron	\$20
Linebaugh	1	Kentucky	Possessing dead robin	\$25
Linebaugh and Yerger*	2	Tennessee	Killing doves in close season	\$10 each and costs
Merrill	4	Illinois	Possessing ducks in storage during close season	\$25 each and costs
Ransom	1	Washington	Possessing great blue heron	\$1
Ransom	2	Washington	Possessing ducks in storage during close season	\$5 each

Cases Terminated - Reports received during August.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Ransom	1	Washington	Shooting ducks after sunset	\$15
Ransom	1	Oregon	Killing band-tailed pigeon	\$10
Shaver	1	Minnesota	Killing gull	\$5
Shupee	1	Texas	Killing doves during close season	\$10
Shupee	1	Texas	Hunting doves after sunset	\$10
Steele	1	Washington	Possessing insectivorous birds	\$10
Steele	1	Washington	Possessing insectivorous birds	\$25
Steele	1	Washington	Possessing ducks in storage during close season	\$10
Steele and Antwine*	1	Washington	Possession and shipment of swan breasts	\$25
Stirling	2	Texas	Possessing ducks in storage during close season	\$10 each
Tonkin	1	Oregon	Hunting ducks after sunset	\$20
Visart	1	Oklahoma	Possessing loon	\$25
Yerger*	4	Tennessee	Killing doves during close season	\$10 each and costs
Yerger*	4	Mississippi	Killing doves during close season	\$25 each and costs

* U. S. Deputy Game Warden

Cases Reported to Solicitor for Prosecution.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Asmuth and Raeth*	2	Wisconsin	Killing ducks in close season
Barneier	1	Illinois	Attempting to kill coots and swallows
Bloxsom and Jester	1	Virginia	Killing a green heron
Bloxsom and Collins	1	Maryland	Killing a least bittern
Hoffman	1	Alabama	Killing doves during close season
Hoffman	1	Alabama	Killing a bull-bat
Perry	16	Tennessee	Killing doves during close season

* U. S. Deputy Game Warden.

ALASKA DIVISION

The Biological Survey motor cruiser "Regal" has been engaged in patrol work connected with fur and game animals during the month in the waters of Southeastern Alaska. On a trip made by Chief Fur Warden Walker from Juneau to Sitka and return he was accompanied by recently-appointed Governor Scott C. Bone, who thus made his first official visit to the former capital of Alaska. The possession of this boat will provide for the first real game and fur law enforcement that has ever been possible in southeastern Alaska, where difficulties of transportation have heretofore made it impossible to do more than sporadic work.

The reindeer investigational work has been making excellent progress during August. Mr. L. J. Palmer, in charge of grazing investigations, and Dr. Hadwen, the Chief Veterinarian, have been cruising on the coast of Bering Sea and the Arctic Ocean to beyond the Arctic Circle studying the reindeer industry at first hand.

Warden Donald H. Stevenson has been engaged in a reconnaissance survey of the Aleutian Islands to ascertain their availability for fox-farming purposes and also their capacity for grazing reindeer and other live stock. His trip included a visit to Attu, the westernmost island of the chain. He has already submitted excellent reports and maps covering several of the islands. This information is the first of the kind that has ever been available and will be invaluable in connection with the utilization of these islands for the purposes to which they may be best adapted. It is planned to continue this survey until every island of sufficient size to be of possible economic value has been studied and reported upon. This is in line with the work the Bureau is doing to assist in developing the natural resources of Alaska and the best conservation and utilization of its wild life.

New regulations relating to land fur-bearing animals in Alaska were promulgated by the Secretary of Agriculture on August 30, 1921, whereby an open season is provided for killing beavers and martens. There has been a continuous closed term for the protection of beavers in the Territory since 1910, and for martens since 1916. One of the new regulations prohibits the killing of land fur-bearers by the use of artificial lights or by the use of a rifle, shotgun, or pistol.

Chief Fur Warden Walker has forwarded to the Bureau reports on Drag, Entrance, and Vank Islands, in southeastern Alaska, as a result of inspections made by him early in the year. Drag and Entrance Islands are occupied by fox farmers, and several applications have been made for permits for Vank Island. All are located in the Tongass National Forest.

Three new permits for propagating martens in southeastern Alaska were issued during August and seven new permits for the use of islands in the Aleutian Islands Reservation were granted for propagating foxes.

THE SURVEY

Monthly News Bulletin of the Bureau of Biological Survey
United States Department of Agriculture

Vol. 2.

Washington, D. C., October 14, 1921.

No. 10

THE SURVEY is issued for office and field men of the Biological Survey under authorization of the Chief of Bureau as a medium for furnishing information regarding the work of the Bureau, movements of the staff, changes in assignments, and news and personal items of importance, with a view to increasing the interest of the personnel in the work of the Bureau as a whole and in each one's individual work as related to it. It is intended primarily for employees and is not in any sense a publication.

GENERAL NOTES

Dr. A. K. Fisher, in charge of Economic Investigations, and Chief U. S. Game Warden Lawyer represented the Bureau at the annual meeting of the International Association of Game, Fish, and Conservation Commissioners, at Allentown, Pa., September 7-9. They report interesting discussions of problems confronting the commissioners in connection with the protection and conservation of game, and a pleasant visit to the noted farm of Gen. Harry Trexler. Features of this well-appointed private game farm are the presence of 50 buffalo, about an equal number of elk, and a large number of deer, in addition to a well-equipped trout hatchery, and a large poultry section.

The Bureau is constantly receiving news items published in all sections of the country, as a result of the interest shown by field men and by employees in Washington in sending in press clippings, many of which probably would not otherwise have come to the attention of officials interested. News items and editorial comment (commendatory and sometimes otherwise) are received in this way every day. Striking items along lines in which the Department as a whole is working are also found useful, for through a departmental clearing house for clippings we receive valuable items from other Bureaus, and with the cooperation of our own men are making a fair exchange. Simply cut the item from a newspaper when you come across it, paste or clip the upper end to a slip of paper, and on the slip write your name, the name and date of the newspaper clipped, and the city or town in which published. A letter of transmittal is not necessary.

A note from U. S. Game Warden C. P. S. Smith announces a discovery that is worth passing on to others, especially as it is in line with the policy of economy in the use of stationery and writing materials, as mentioned in THE SURVEY for July, following a meeting of the administrative organization called by the Director of the Budget. Mr. Smith has found that the life of a typewriter ribbon may be prolonged considerably by simply reversing it. He reports that when the side of the ribbon coming in contact with the typewriter had become practically inkless, he tried the experiment of using the other side, and continued so doing for approximately the length of time the ribbon was used before it was "worn out." His letter showed that the reversed ribbon was still capable of producing perfectly satisfactory work.

Very favorable reports have been received both from press comment and from Department representatives in charge of the exhibits made by the Department at the State fairs relative to the excellent cooperation which has been given by the Bureau representatives who have contributed material of local interest. Reports indicate that this supplementary matter has added greatly to the success of the exhibits and that the work done by the local representatives of the Bureau in discussion and explanation added much to the interest and value of the exhibits.

The following publications of the Bureau were issued in September:

S.R.A.-B.S.42. "Hunting of Migratory Game Birds on Nine-Pipe and Pablo Reservations, Montana;" p. 1, issued September 12.

S.R.A.-B.S.43. "Regulations for the Protection of Land Fur-bearing Animals in Alaska;" pp. 4, 1 map; issued September 10.

Yearbook (1920) Sep. 836. "Conserving Our Wild Animals and Birds," by Edward A. Goldman; pp. 159-174, 16 ills; issued September 19.

Yearbook (1920) Sep. 843. "Farm Help from the Birds," by W. L. McAtee; pp. 253-270, 16 ills; issued September 22.

Yearbook (1920) Sep. 843. "Hunting Down Stock Killers," by W. B. Bell; pp. 289-300, 10 ills; issued September 19.

Among manuscripts submitted in September for approval for outside publication were the following:

Jackson, H.H.T., "Some Birds of Roosevelt Lake, Arizona," for The Condor.

Wetmore, Alexander, "A Fossil Owl from the Bridger Eocene," for The Auk; and "Three New Birds of the Family Tinamidae from South America," for the Journal of the Washington Academy of Sciences.

September was "moving day" for many of the Washington offices of the Bureau, the transfer of the Division of Food Habits Research to separate quarters having lessened the congestion and made possible relocations of some of the offices of all divisions. The work will be completed early in October.

BIOLOGICAL INVESTIGATIONS.

Mr. E. A. Goldman has returned from a trip to the Wichita National Forest and Game Preserve, where, in cooperation with the Forest Service, investigations were made of summer conditions affecting game with a view to formulating plans for future game administration. The buffalo, elk, and wild turkeys reintroduced on the preserve are thriving and have increased at a satisfactory rate.

Dr. W. P. Taylor reports a successful field season in the State of Washington, where with the assistance of Mr. G. G. Cantwell and the cooperation of State officials he is bringing to a close the field work required in connection with the survey of the State. The work this year was centered in the Olympic Mountains and adjacent areas.

Mr. Edward A. Preble, who has been suffering from a severe attack of rheumatism since early in August, has improved considerably, and is now recuperating on the old family homestead at Ossipee, New Hampshire.

Dr. Harry C. Oberholser, who represented the Biological Survey at the American School of Wild Life Protection, at McGregor, Iowa, from August 6 to 19, reports a largely increased interest and attendance. Tuesday, August 9, was set apart as "Government Day," and was devoted to a consideration of the conservation work of Federal and State Governments.

ECONOMIC INVESTIGATIONS.

Plans have been completed for Mr. James Silver to visit the Edgewood Arsenal to cooperate with the Chemical Warfare Service in determining the practicability of utilizing for the destruction of rodents certain of the gases developed for war purposes. A preliminary study is now in progress and the results will determine whether detailed experiments shall be undertaken.

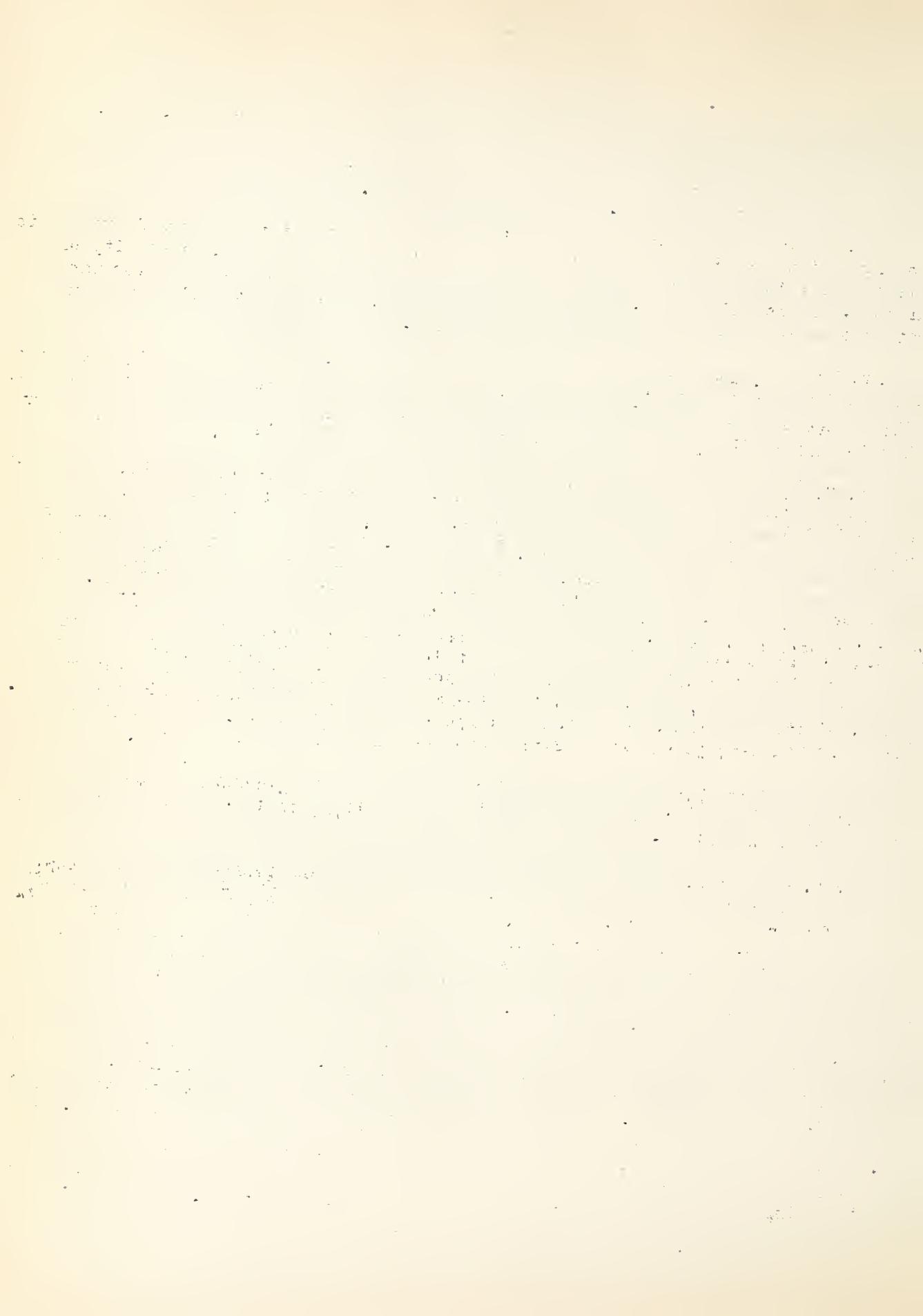
Mr. Frank G. Ashbrook attended the fur sale conducted in September by the International Fur Exchange at St. Louis, Mo., for the purpose of obtaining information regarding furs and fur market conditions and checking up the handling and sale of furs taken in connection with the Bureau's predatory animal operations.

Dr. H. L. Van Volkenberg, a graduate of the Agricultural and Veterinary Colleges of Cornell University and a member of the staff of the Veterinary College, was appointed on September 1 as assistant to Dr. Karl B. Hanson in the investigations in progress at the Experimental Fur Farm, Keeseville, N. Y., and other studies which will be undertaken regarding diseases to which foxes and other fur-bearing animals are subject when kept in captivity. His official station will be Keeseville. Plans have been completed for a considerable enlargement of the investigational program under the direction of Dr. Hanson, which will include in addition to the experimental investigations on the Fur Farm, a survey of disease conditions prevailing on fox farms throughout the United States. This work will be conducted in cooperation with a limited number of producers of silver foxes and other fur-bearing animals. Dr. W. B. Bell visited the fur farm September 12-16 to confer with Drs. Hanson and Van Volkenberg relative to the organization and carrying out of this program.

Mr. J. Stockley Ligon has completed his assignment in Missouri and Iowa and is now stationed at Marquette, Mich., assisting game officials in the predatory animal operations in that State.

Mr. R. E. Bateman reports the capture by the Standish brothers of the notorious wolf that has operated for some years in the vicinity of Pryor Creek along the borders of the Crow Reservation, Montana. This animal has been responsible for heavy losses of horses, colts, and cattle in this vicinity for a period of six years. He was captured in time to bring him alive for exhibition at the fair held at Billings along with the Department exhibit. The capture and display of this old renegade aroused great interest among stockmen.

Mr. M. E. Musgrave also was fortunate in getting a shot at an old wolf that has caused heavy losses of cattle on ranches in the vicinity of Kingman, Ariz. This wolf, which is known to have killed 50 head of pure-bred Hereford calves on a single ranch during the past year, was unexpectedly flushed from the sagebrush as Mr. Musgrave was driving across the range distributing poison for the purpose of getting him. Mr. Musgrave's quick, sure work with the rifle in thus ending the career of this notorious animal aroused the greatest enthusiasm among the neighboring stockmen, who are resting easier now that it is no longer roaming the range.



Messrs. Theo. H. Scheffer and Leo K. Couch have concluded investigations which have been in progress as occasion offered for the past two years with a view to developing practical methods of capturing beavers alive in places where their presence is objectionable so that they may be transferred to other points where they are desired. Important improvements have been made in traps and trapping procedure and a point has been reached in investigations where these animals can be captured and transferred very satisfactorily. This makes it possible not only to afford relief to landowners suffering from their depredations, but at the same time to stock regions where beavers may prove valuable assets.

Mr. Harry P. Williams was given appointment as predatory animal inspector on September 16 and assigned to assist Mr. Bayer in Wyoming.

Mr. J. Ray Williams, who has been working under the direction of Mr. Joseph Keyes in Colorado, has been transferred as assistant to Mr. B. B. Richards in the rodent work in the State of Utah.

Mr. Charles A. Staples, who has had extended experience in the rodent and predatory animal work of the Bureau, has recently received a temporary appointment as field assistant and been assigned to the California district to aid Mr. Poole in carrying out the winter poisoning campaigns against coyotes.

Mr. Percy L. DePuy, who has been employed for some time under the direction of Mr. Joseph Keyes in conducting the rodent eradication work in Kansas, has been granted a furlough in order that he may continue his college work.

Miss Shumah E. Quigley has been appointed as clerk in the office of Dr. Bach and Mr. Couch, at Olympia, Wash., effective on October 16. Miss Idella Ustrud, of the Portland office, was transferred temporarily to assist in the organization of the Olympia office, and the system of records and reports has been established and everything put in good order. Work at the new headquarters is progressing very satisfactorily.

Miss Frances E. Voight, who has been employed on State funds as clerk in the Albuquerque office, received appointment on the regular staff on October 1.

Mr. George H. Browne, at one time engaged in prairie-dog operations and more recently with the United States Shipping Board, was appointed as clerk and assigned to the Albuquerque office on October 1.

FOOD HABITS RESEARCH.

Messrs. F. P. Metcalf and W. F. Kubichek, who are continuing their survey of the marsh and aquatic plants of Minnesota lakes, were handicapped greatly during the month of September by heavy rains. These have at times made it impracticable for them to travel in the motor truck with which they are equipped. However, the truck proved its worth during the month of August, when more than 950 miles were covered at an average cost of 2.2 cents per mile.

Mr. Charles C. Sperry has begun field work in Colorado with a view to devising measures for controlling damage by pinon jays. Due to the roving habits of these birds, which travel about in large flocks, the problem is a difficult one and it is hardly believed that more than a beginning can be made this year.

Mr. E. R. Kalmbach has gone to Imperial Valley, California, where he will endeavor to find methods of decreasing damage done by the hordes of blackbirds that roost in swamps along the lower Colorado River and devastate neighboring farm areas.

Mr. Remington Kellogg's trip to Fishers Island, New York, for the purpose of observing the migration of hawks there and collecting specimens, met with fair success. The flight has not been so pronounced as during the last few years on account of the lack of northwest winds, which seem to be required to bring large numbers of hawks over the island.

Mr. C. W. Leister, who was employed in the Division for the summer, has returned to Cornell University, where he is an instructor in Ornithology and is pursuing a course leading to a degree of Doctor of Philosophy.

GAME AND BIRD RESERVATIONS.

Mr. R. H. Pyfrom has been appointed Warden of the Charlotte Harbor Group of bird refuges (Island Bay, Matlacha Pass, and Pine Island) and also of the Caloosahatchee Bird Refuge, in Florida, with headquarters at Boca Grande.

Messrs. Henry C. Holcomb, Casper N. Fosmark, and P. C. Dahl, employees of the Reclamation Service, have been appointed wardens of the Carlsbad and Willow Creek Refuges, respectively, to cooperate with this Bureau in protecting the birds at those reservations. Messrs. Holcomb and Fosmark are stationed at the Carlsbad Refuge, New Mexico, and Mr. Dahl is in charge of the Willow Creek Refuge, Montana.

Mr. and Mrs. F. W. Triska, stationed at the Sullys Hill Game Preserve, North Dakota, have our sympathy in the death of their baby.

MIGRATORY BIRD TREATY AND LACEY ACTS.

Mr. Thomas P. Hall, of Maxwell, Calif., a former State game warden of California, was appointed U. S. Game Warden for the central and northern district of California, effective September 16. Mr. Hall's headquarters have been designated as Sacramento and his district comprises that portion of the State north of but not including the counties of San Luis Obispo, Kern, and San Bernardino; also the counties of Esmeralda, Mireral, Lyon, Douglas, Ormsby, Storey, and the southwestern portion of Washoe, in Nevada. His address is: c-o Board of Fish and Game Commissioners, Sacramento, Calif.

On September 3 an order was issued by the Secretary including Colorado in the list of States in which robins may be killed under permit when found damaging cherries and other small fruits. The order permits the birds to be killed from May 16 to September 30.

A violator recently arraigned in the Federal court at Springfield, Ill., for killing wild ducks during the month of March, was fined \$75 together with costs in the sum of \$20.20, and in default of payment was remanded to jail.

A report received from Alliance, Nebr., dated September 18, states that the lakes in that vicinity are literally covered with wild ducks of all kinds and that since the opening of the Federal season "hunters have been returning to town in time for breakfast loaded down with the bag limit."

October 1921.

Announcement has been received of the marriage of Warden Conrad F. Asmuth and Miss Loa Rossiter, at Milwaukee, Wisconsin, on October 1. Mr. and Mrs. Asmuth have our best wishes.

The headquarters of Warden Shupe have been changed from San Antonio to Beaumont, Tex.

Mrs. Lillian K. Hohman has resigned from the position of typist in the Washington office, effective October 11.

The Bureau has learned with regret of the death of U. S. Deputy Game Warden Herbert J. Frost, Bronxville, N. Y.

On page 5 of the September issue of THE SURVEY in the sixth paragraph the opening date of the Federal season for shorebirds in Maryland should have been stated as August 16 instead of October 16.

The following appointments were made to the position of U. S. Deputy Game Warden during the month of September:

David C. Smart, 325 Calvert Bldg., Baltimore, Md.
 Charles T. Lawton, 803 N. Fairview Ave., St. Paul, Minn.
 Harry B. Smedley, 207 W. Hauser St., Marceline, Mo.
 Arba H. Bridges, 4014 Wentworth Ave., So., Minneapolis, Minn.
 Joe F. Sharp, Moiese, Mont.
 William A. Rife, 1721 Iowa Ave., St. Louis, Mo.
 Samuel O'Brine, 3038 "C" Ave., East, Cedar Rapids, Iowa.
 Hobart Johnson, R. D. No. 3, Canton, N. C.
 Richard E. Thomas, 109 Kellogg Ave., Kellogg, Idaho.
 Fred Sandham, Gilmore City, Iowa.
 Harry W. Denny, 601 S. Poplar St., Sapulpa, Okla.
 Jack Rollins, 406 Bluemont St., Manhattan, Kans.
 Chas. H. Tieken, 517 Chestnut St., Fort Madison, Iowa.

Appointments of the following U. S. Deputy Game Wardens were terminated during the month of September:

Geo. I. James, 212 N. Virginia St., Reno, Nev.
 William Baker, 732 S. Lawrence St., Wichita, Kans.
 R. M. Spillman, 108 Commerce Ave., Memphis, Tenn.

Cases Terminated - Reports received during August.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Bloxsom	1	Maryland	Killing grebe	\$10 and costs
Linebaugh	1	Tennessee	Killing mourning doves during close season	\$5 and costs
Pacetti	1	Florida	Killing black-crowned night and snowy herons	\$15
Merrill	1	Illinois	Killing ducks in close season	\$75 and costs

Cases Reported to Solicitor for Prosecution.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Birsch	1	Virginia	Killing blue heron
Bloxsom	1	Delaware	Killing sandpipers
Bloxsom	1	Maryland	Killing bittern
Farrham and B.E. Smith	4	New York	Killing sandpipers
Hilliard	2	New Jersey	Killing knots
Merrill and Barneier	1	Illinois	Killing mourning doves in close season
Pacetti	1	Florida	Killing herons
Perry	1	Mississippi	Killing grebe
Perry and Banks*	5	Mississippi	Killing wood ducks
Ransom	4	Montana	Hunting ducks after sunset
Ransom	1	Washington	Possessing and shipping grebe
Shupee	2	Texas	Killing meadowlarks

*U. S. Deputy Game Warden.

ALASKA DIVISION.

Mr. L. J. Palmer, Assistant in Charge of Reindeer Grazing Investigations, and Dr. Seymour Hadwen, Chief Veterinarian in Reindeer Investigations, will leave Nome in October on the last boat of the season for Seattle and Washington. They will remain in Washington for several months preparing a report which will give the results of their reindeer investigations in Alaska made since July, 1920, and contain their recommendations for improvements in the methods of handling reindeer. The report will be of the utmost value to this new industry.

Shipments of muskrat skins from Alaska this year will exceed in number those of any year in the history of the Territory. Already reports have been received showing that more than 210,000 skins have been shipped since December 1, 1920, over 7,000 more than were shipped last year, and reports of shipments covering the months from August to November are still to be added.

The collector of customs at Seattle, Wash., has advised the Bureau of the seizure of 85 beaver skins and 7 otter skins, as well as other skins of land fur-bearing animals illegally killed and shipped out of Alaska.

The Bureau's boat "Hazel," used in the reindeer work, has been laid up for the winter at Unalakleet, where the experiment station is located.

Dr. John C. Corl tendered his resignation as veterinarian, Alaska reindeer investigations, shortly after reaching Alaska, effective September 26, and it was immediately accepted. He will probably return to the States on the last boat leaving Nome.

Mr. Harry Peehan has resigned as deputy fur warden at Killisnoo, Alaska. No appointment as his successor will be made for the time being.

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THE SURVEY

Monthly News Bulletin of the Bureau of Biological Survey
United States Department of Agriculture

NOV 13 1921

Vol. 2.

Washington, D. C., November 14, 1921.

No. 11

THE SURVEY is issued for office and field men of the Biological Survey under authorization of the Chief of Bureau as a medium for furnishing information regarding the work of the Bureau, movements of the staff, changes in assignments, and news and personal items of importance, with a view to increasing the interest of the personnel in the work of the Bureau as a whole and in each one's individual work as related to it. It is intended primarily for employees and is not in any sense a publication.

GENERAL NOTES

Dr. Nelson has left Washington on a several weeks' trip through the West where he will visit the headquarters of the field men. His itinerary will include stops at Chicago, Ill.; Manhattan, Kans.; Denver, Colo.; Ogden and Salt Lake City, Utah; Reno, Nev.; Sacramento, Calif.; and other points. He expected to take this trip earlier in the season but was prevented by important matters which required his presence in Washington.

Assistant Chief Henderson was absent from the city during the latter part of October in connection with official duties.

In the exhibit of Alaskan resources at the American Mining Congress, held in Chicago in October, the Biological Survey was represented with illustrations in color of the fox fur industry, the reindeer as a source of meat supply and as a beast of burden, and the game of Alaska.

Mr. Herbert S. Ward has been transferred from the Bureau to the Office of Inspection in the Secretary's Office. The Bureau regretted very much to lose his services as he has made an enviable record in handling the accounting work during the past two years and a half, but the change meant promotion and an opportunity to serve the Department in a larger way.

Mr. Edward J. Cohnan was transferred on October 24 from the recently created General Accounting Office to take charge of the Bureau's accounting work, succeeding Mr. Ward. Mr. Cohnan has had several years of valuable experience in the Office of the Auditor for the State and other Departments, Treasury Department, and is well qualified to fill the position vacated by Mr. Ward.

The following publications of the Bureau were issued in October:

Yearbook (1920) Sep. 855. "Death to the Rodents," by W. B. Bell; pp. 421-438, 17 ills.; issued October 5.

Farmer's Bulletin 1238. "Laws Relating to Fur-bearing Animals, 1921," by Geo. A. Lawyer and Frank L. Earnshaw; pp. 31, title-page illustration of muskrat by R. J. Sim; issued October 5.

Department Circular 196. "Directory of Officials and Organizations Concerned with the Protection of Birds and Game, 1921;" by Geo. A. Lawyer and Frank L. Earnshaw; pp. 20; issued October 18.

North American Fauna No. 45. "A Biological Survey of Alabama; Part I, Physiography and Life Zones; Part II, The Mammals," by Arthur H. Howell; pp. 88, pls. 11, figs. 10; issued October 28.

Among manuscripts submitted in October for approval for outside publication were the following:

Ashbrook, F. G., "The Merits of Silver Fox Farming," for the American Fox and Fur Farmer; and "Judging Silver Foxes," for The Black Fox Magazine.

Bell, W. B., Articles for The Young People's Encyclopedia of Agriculture.

McAtee, W. L., "Notes on Food Habits of the Shoveller or Spoonbill Duck (Spatula clypeata)," and "Notes on the Food of the Guachero (Steatornis caripensis), for The Auk; "A Shower of Corixidae," for Entomological News; and "Attracting Birds to Golf Courses," for the Bulletin of the U. S. Golf Association.

Silver, James, "Have You Killed Your Rat?" for the New England Homestead.

Dr. Geo. W. Field, formerly in charge of the Bureau's Game and Bird Reservations, and more recently connected with the fisheries work of the Government of Brazil, called at the Washington offices in October, on his return trip from South America.

Miss Helen L. Moore, of the Accounts Section, who has been ill for several weeks, is reported to be on the road to recovery.

BIOLOGICAL INVESTIGATIONS.

Mr. Vernon Bailey has returned to Washington after a successful field season studying the habits of beavers in Minnesota, Wisconsin, and the Adirondacks, where much information was gathered on their habits, food, destruction of timber, and possibilities in control and culture. Much information also was gathered on the food and general habits of other animals, a few of which in addition to three live beavers were brought back for further study.

Dr. W. P. Taylor has been engaged during October in making observations and checking conditions in and about the rodent experimental plots in Arizona. The plots were established for the purpose of determining especially the effect of injurious rodents upon forage and the carrying capacity of stock ranges.

ECONOMIC INVESTIGATIONS.

During the month the bureau laboratory for investigation of methods for the destruction of injurious animals, which has been located at Albuquerque, N. Mex., was transferred to Denver, Colo. The laboratory is now located at 305 Railroad Building. Messrs. S. E. Piper and H. E. Williams have been busy getting equipment installed and everything in working order so that necessary supplies of poison might be processed and available for use in the poisoning campaigns this winter. Excellent reports are being received from the field as to results being obtained in poisoning campaigns against coyotes through the use of the special strychnine preparation recently devised and improved at the Albuquerque laboratory. Arrangements have been made for processing at the Denver laboratory supplies of the special strychnine that may be required for the use of cooperators. The laboratory is now favorably located and work is being pushed forward rapidly with a view to the completion at an early date of investigations which have been in progress for some time.

Miss Frances E. Voight, who has been employed at the Albuquerque office, has been transferred as clerk to Denver for duty in connection with the project on eradication methods.

Mr. J. Ray Williams has been transferred from the Colorado district, where he has assisted Mr. Joseph Keyes, to Salt Lake City, Utah, where he will be similarly engaged with Mr. Richards in the cooperative work against rodents in the State.

Mr. R. K. Stewart, who has been employed as assistant to Mr. L. J. Goldman in the predatory animal operations in Idaho, has been transferred to Nevada to assist Mr. Sans in the conduct of the work there.

Mr. Samuel Driggs, one of the most successful hunters on the Idaho force, was successful in passing the Civil Service examination and was appointed on October 17 as predatory animal inspector, assistant to Mr. Goldman in the Idaho district.

Mr. Louis Knowles reports that one sheepman in South Dakota had lost 110 sheep and lambs out of a flock of 1,400, owing to the depredations of coyotes. Hunter J. N. Martin took nine coyotes in the vicinity, completely stopping losses in this flock and once more demonstrating that the taking of a relatively small number of animals may afford complete protection to the live stock of a locality by getting the animals addicted to killing.

Miss Shumah E. Quigley was transferred from the War Department and reported at Portland, Oreg., October 15. After a brief period spent at this office she will be transferred to the office at Olympia, Wash., relieving Miss Ustrud, who will return to the Portland office.

Mr. James Silver has been detailed to visit the laboratories of the Chemical Warfare Service, at the Edgewood Arsenal, Md., with a view to obtaining information regarding gases devised for war purposes and possibilities of applying them in connection with operations against injurious rodents. The Chemical Warfare Service is

cooperating very heartily with the Bureau in an effort to make all possible use of information obtained in the researches upon poisonous gases and has offered to place its records and laboratory facilities at the disposal of Bureau representatives.

Mr. Silver has also been making an extended trip through the New England States attending conventions of extension service workers, visiting extension service organizations, and investigating conditions as regards damage by rodents in this region. He reports mice as doing much damage in many localities and that they have this year started depredations much earlier than usual, due apparently to shortage of natural food occasioned by drought or other local factors. Owing to the seriousness of losses in orchards and truck farms, interest in the control of meadow mice and pine mice is growing rapidly, as well as in the organization of effective campaigns for the control of house rats and mice.

Mr. Frank G. Ashbrook is visiting points in the New England States and in Canada, continuing his study of conditions prevailing on fox ranches. He has reached Prince Edward Island and will continue his trip westward, attending the silver fox show at Muskegon, Mich., early in December and visiting other points in the Middle West where fur farming operations are in progress.

The morning papers of October 26 announced the marriage of Miss A. M. Reed, of this Division, and Mr. A. C. Jeffries on October 25. A hearty welcome was given Mrs. Jeffries on her return to the office and the best wishes of the entire force were extended.

FOOD HABITS RESEARCH.

Messrs. W. F. Kubichek and F. P. Metcalf have returned from their field work in Minnesota. About fifty lakes, several of them very large ones, were surveyed during the summer for their resources as feeding places for wild fowl.

Mr. Chas. C. Sperry also has completed his work in relation to the pinon jay in Colorado. The species proved much easier to poison than had been anticipated, and as a result of Mr. Sperry's work the Survey is in a position to advise ranchers of a practical method of controlling these birds.

Mr. E. R. Kalmbach who is investigating depredations of blackbirds in Imperial Valley, California, reports the situation as serious and as calculated to tax our resources to improve. There is a possibility that in this case toxic gases may prove to be the only effective means of control.

GAME AND BIRD RESERVATIONS.

Mr. Bryan Nowlin, Assistant Warden at the Elk Refuge, was temporarily assigned to duty at the Niobrara Reservation during September and half of October, to assist Mr. F. M. Dille, and is at present on temporary duty at the Bison Range, to assist Warden Hodges.

The ring neck pheasants, a gift from the State Game and Fish Commission of Montana, which were released on the National Bison Range last autumn, have done remarkably well. Warden Hedges reports that he believes about one hundred pheasants have been raised from the original brood, and that there are now approximately 125 on the Range.

Fifty ring neck pheasants were liberated in Sullys Hill Game Preserve in September 2. These birds came from the State Game Farm of North Dakota, at Grafton. The object of the pheasant introduction at Sullys Hill is to give the birds a chance to establish themselves within this preserve, as a center from which they can spread over the adjacent region of woods and prairie.

Thirty-four deer, 17 white-tailed and 17 black-tailed, have been received at the Bison Range. These animals were generously donated by Mr. Frank Conley, of Deer Lodge, Mont., who, a few years ago, presented four antelope to the Range. Thirty-five deer were shipped from Deer Lodge, but one doe died in transit; the others were received in good condition. Mr. Conley's donation is very much appreciated.

Sixty-two buffalo calves were born at the Bison Range during the spring and summer, and the losses in the herd have been one bull and two cows.

A buffalo calf was born at Sullys Hill Game Preserve early in October, which brings the number in the herd at that place to ten.

By a recent Executive order, certain lands have been eliminated from the North Platte Bird Reservation in Nebraska. This elimination is in no way detrimental to the reservation.

Information has been received from Warden Kroegel, at the Pelican Island Reservation, that the recent storm which created much havoc in Florida has washed away all the pelican nests on the island but that the birds have already resumed nesting.

Warden Pacetti, at the Mosquito Inlet Reservation, reports that during the storm mentioned above he was on a boat trip which took in the Mosquito Lagoon and Banana River and that he went through the most severe hurricane that has visited that section since 1897. By making an extreme effort he succeeded in reaching the Haulover Canal between Indian River and Mosquito Lagoon, where he was obliged to remain for several days before the storm abated. He says he has never seen the water so high on the rivers.

MIGRATORY-BIRD TREATY AND LACEY ACTS.

Announcement was received of the marriage on October 3 at Thomasville, Ga., of Mr. E. B. Whitehead and Miss Annie Mae Cooper. Mr. Whitehead is U. S. Game Warden for Georgia and northern Florida. Mr. and Mrs. Whitehead have our best wishes.

Chief Warden Lawyer and Deputy Chief Warden Denmead attended and addressed the annual meeting of the Maryland State Game and Fish Protective Association, at Baltimore, October 25.

Warden Shupee has been prompted by Warden C. P. S. Smith's note in THE SURVEY for October, regarding the renewal of typewriter ribbons, to report not only that he has been practicing this with success but also that he prolongs the life of carbon paper by the application of heat. He says that many times when stock was low, he has renewed old carbon papers by laying them over a radiator or stove, not long enough, however, to make the coating run in patches. He says that by careful manipulation "worn out" carbons may thus be renewed to practically their original condition.

Attention is called to the change in addresses of U. S. Game Wardens Asmuth and Barmeier. Mr. Asmuth's address is 3512 Vliet St., Milwaukee, Wis., and Mr. Barmeier's is 4947 Schollmeyer Ave., St. Louis, Mo.

The following appointments were made to the position of U. S. Deputy Game Warden during the month of October:

Hope H. Bonney, Fifth St., Willoughby Beach, Norfolk, Va.
 George W. Anderson, 427 Evans Ave., Reno, Nev.
 Henry Fox, Mercer University, Macon, Ga.
 Lyman G. Fitzgerald, 237 W. 11th Ave., Columbus, Ohio.
 Vurn Welch, R. D. No. 1, Oak Harbor, Ohio.
 Louis B. Adams, Princeton, Maine.
 George Pepenbrook, 4118 Green Lea Place, St. Louis, Mo.
 John H. Stempel, Fallston, Md.
 James J. McHugh, Browning, Ill.
 Thos. W. Dinwiddie, Browning, Ill.
 George R. Duncan, 1003 Locust St., Missoula, Mont.
 Chas. A. Jakways, Helena, Ark.
 William Otto, P. O. Box 757, Helena, Mont.
 Elmer R. Potter, Fayetteville, Ark.
 Ernest G. Bragdon, 506 Marine St., Mobile, Ala.

Appointments of the following U. S. Deputy Game Wardens were terminated during the month of October:

Edwin M. Yerger, 80 Exchange Ave., Memphis, Tenn.
 Ernst E. Behr, Faculty Club, Berkeley, Calif.

Cases Terminated - Reports received during October.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Asmuth	3	Wisconsin	Hunting ducks during close season	\$10 each
Barmeier	1	Missouri	Selling ducks to guests	\$50
Barmeier	1	Texas	Purchasing aigrettes	\$10
Birsch	1	Virginia	Offering migratory birds for sale	\$10 and costs
Birsch	1	Virginia	Offering migratory birds for sale	\$40 and costs

Cases Terminated (Continued)

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Birsch	1	Virginia	Offering aigrettes for sale	\$25
Birsch	2	North Carolina	Hunting ducks from motorboat	\$50 each and costs
Birsch	1	North Carolina	Illegal transportation of water-fowl out of State	\$25 and costs of \$63.85.
Bloxson	1	Maryland	Killing bittern	\$5
Bloxson	3	Maryland	Hunting ducks from motorboat	\$2 each and costs
Bloxson and Collins	1	Maryland	Killing bittern	\$1
Charlton	1	South Carolina	Selling ducks	\$200 and costs and 3 months in jail.
Hoffman	4	Alabama	Killing doves	\$5 each
Linebaugh	2	Illinois	Hunting ducks during close season	\$5 and costs of \$21.30 each
Linebaugh	1	Illinois	Hunting ducks during close season	\$25 and costs of \$44.77
Linebaugh	1	Illinois	Capturing live wild ducks	\$10 and costs of \$28.87
Ortiz* Perry	1	New Mexico	Hunting doves during close season	\$25
	7	Mississippi	Hunting ducks after sunset	\$10 each and costs of \$27
Stone*	3	Michigan	Hunting ducks from motorboat	\$50 each and costs
Whitehead	20	Georgia	Killing doves during close season	\$20 each
Whitehead	1	Georgia	Offering aigrettes for sale	\$20

Cases Reported to Solicitor for Prosecution.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Asmuth	1	Wisconsin	Purchasing ducks
Asmuth	1	Wisconsin	Selling ducks
Asmuth	1	Wisconsin	Killing ducks during close season
Asmuth and I. G. Smith	4	Wisconsin	Killing ducks during close season
Asmuth and I. G. Smith	2	Wisconsin	Killing and possessing coots in close season
Babson*	1	Massachusetts	Hunting ducks after sunset
Banks* and Perry	2	Mississippi	Killing wood ducks
Bemis*	1	Massachusetts	Killing sanderlings
Bloxson	6	Maryland	Killing sandpipers
Bloxson and Vineyard	3	Delaware	Killing black-crowned night herons
Charlton and Pfarr*	1	Ohio	Killing grebe
Charlton and Pfarr*	1	Ohio	Killing wood duck

Cases reported for prosecution (Continued)

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Farnham and Hilliard	4	Pennsylvania	Killing wood ducks
Hagar*	2	Massachusetts	Killing shorebirds
Heisler and Bloxsom	1	Maryland	Hunting ducks during close season
Hoffman	4	Alabama	Killing doves during close season
Holmes	1	Nebraska	Possessing specimens of migratory birds
Lacourse and Champaign	2	Ohio	Killing ducks during close season
Linebaugh	2	Tennessee	Killing doves during close season
Linebaugh	5	Kentucky	Killing doves during close season
Lindgren*	2	Illinois	Killing insectivorous birds
Merrill and Fidler*	1	Illinois	Killing ducks during close season
Pacetti and Whitehead	27	Georgia	Killing doves during close season
Peck* and Stadlmeir	2	Massachusetts	Killing green herons and sandpipers
Ransom	1	Washington	Killing grebe
Ransom	2	Washington	Attempting to kill ducks during close season
Shaver and Kelsay	1	Minnesota	Hunting ducks after sunset
Simms and Bloxsom	1	Maryland	Possessing American bittern
Shupee	1	Texas	Killing bitterns and jacksnipe
Shupee	1	Texas	Killing meadowlarks
Shupee	1	Texas	Killing black-crowned night herons
Smith, B.E.	2	Maine	Killing wood duck
Stadlmeir and Smith*	2	Connecticut	Hunting ducks after sunset
Stadlmeir	1	Maine	Killing gulls
Stadlmeir and Peck*	1	Massachusetts	Killing willet
Stadlmeir and Peck*	1	Massachusetts	Hunting ducks during close season
Stadlmeir, Burney* and Goodwin	1	Massachusetts	Killing marsh wrens
Stadlmeir and Peck*	2	Massachusetts	Killing dowitchers
Stadlmeir and Steele*	1	Massachusetts	Killing turnstones
Steele*	5	Massachusetts	Killing sandpipers
Tonkin	1	Oregon	Killing bee martins (Kingbirds)
Tonkin	3	Idaho	Killing blue herons and killdeer
Tribou* and Leonard*	1	Massachusetts	Killing sandpipers
Visart	1	Oklahoma	Killing ducks during close season
Whitehead	1	Georgia	Killing wood duck

*U. S. Deputy Game Warden.

THE SURVEY

November, 1921.

ALASKA DIVISION.

Fur Warden O. J. Murie, at Fairbanks, has reported the seizure of skins of eight martens and ten beavers which he is forwarding to the Bureau, along with twelve marten skins seized by the U. S. marshal and turned over for disposal. Twenty-two beaver skins also have been received from Chief Fur Warden Walker, at Juneau, seized while he was on an investigating trip along the Stikine River.

Mr. L. J. Palmer, in charge of the reindeer grazing investigations in Alaska, and Dr. Seymour Hadwen, Chief Veterinarian, with headquarters at the experimental station at Unalakleet, have arrived at Seattle. They are expected to reach Washington about November 15, where they will spend the winter preparing their report on the results accomplished during over a year's stay in the Territory.

Deputy Fur Warden Frank Cassel, who has been stationed at Atka Island, Alaska, will make his winter headquarters at Akutan.

Chief Fur Warden Ernest P. Walker, at Juneau, has had a much-needed improvement installed on the Bureau boat "Regal" in the way of a heating plant.

Mr. Herbert W. Johnston, Field Assistant Alaska Reindeer Investigations and Deputy Fur Warden, will continue investigations in connection with reindeer work during the coming winter, probably in conjunction with Mr. Olaus J. Murie, Assistant Biologist and Fur Warden.

THE SURVEY

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THE SURVEY is issued for office and field men of the Biological Survey under authorization of the Chief of Bureau as a medium for furnishing information regarding the work of the Bureau, movements of the staff, changes in assignments, and news and personal items of importance, with a view to increasing the interest of the personnel in the work of the Bureau as a whole and in each one's individual work as related to it. It is intended primarily for employees and is not in any sense a publication.

GENERAL NOTES

Dr. Nelson has completed his western trip and is now en route to Washington, where he is expected about the middle of the month.

The following publication of the Bureau was issued in November: Farmers' Bulletin 525 (revised). "Raising Guinea Figs," revised from data prepared by the late Prof. David E. Lantz; pp. 12, figs. 6; received November 21.

Among manuscripts submitted in November for approval for outside publication were the following:

Buchanan, L. L., "Notes on Apion, with Descriptions of Two New Species (Corculionidae)," for Proceedings Entomological Society of Washington.

Dalrymple, Bud, "Hunting Wolves and Coyotes for Uncle Sam," for Fur News Magazine.

McAtee, W. L., "The periodical Cicada, 1919: Brief Notes for the District of Columbia Region," for Proceedings Entomological Society of Washington; "Notes of the Abundance of Mosquitoes," for Entomological News; and "Bryant's 'California Hawks: How to Identify Them,' a Review," for the Auk.

Preble, E. A., "Roderick Ross MacFarlane, 1833 - 1920, a Biographical Sketch," for The Auk.

Wetmore, Alexander, "A Specimen of Markham's Petrel," for The Condor; "Una Especie de Hoco Neuva para la Fauna Argentina," for El Hornero; and "Bird Remains from the Caves of Porto Rico," for Bulletin American Museum of Natural History.

Dr. A. K. Fisher and Dr. T. S. Palmer were designated official representatives of the Bureau at the annual meeting of the American Ornithologists' Union, which convened in Philadelphia, Pa., from November

7 to 12. Other members of the Bureau in attendance were Messrs. W. L. McAtee, E. A. Goldman, A. H. Howell, Vernon Bailey, H. C. Oberholser, Alexander Wetmore, and F. C. Lincoln, Miss May T. Cooke, and Mrs. Jane S. Elliott. The meeting, which was well attended, was held at the Academy of Natural Sciences. Among the forty papers presented, six were by representatives of the Biological Survey. On Friday a number of the members visited the Philadelphia Zoological Park, where they were entertained by Dr. Charles Penrose, the President, and Superintendent C. Emerson Brown. On Saturday, although the weather was inclement, a number visited the Pine Barrens of New Jersey as the guests of Mr. J. Fletcher Street. Mr. Lincoln, of this Bureau, was one of the five associates who were elected members.

To assist members of the Biological Survey in supplying information affecting the work of the Bureau, as noted in newspapers and magazines, a supply of press-clipping slips has been furnished generally, and there is an ample stock on hand for all who will use them. This slip was thought to be about the most modern adaptation possible of similar slips in use throughout the Department, but it remained for our genial file clerk, Mr. Klein, to supply a touch of originality in suggesting the gummed strip, so that attaching the clipping is a simple matter.

BIOLOGICAL INVESTIGATIONS

Mr. Vernon Bailey has gathered in most of the small rodents sent alive from Arizona last spring and cared for at the National Zoological Park and by various individuals until his return, and again has them comfortably housed where he can continue his study of their habits in captivity. Some of the nocturnal species are kept on his sleeping porch, where with a flashlight their habits are observed in wakeful hours at night, a few cages are kept in his library for evening observation and others are in a mouse-proof room of out-door temperature, where they are free to hibernate and live as nearly as possible normal lives. Besides his beavers, kept under observation at the Zoological Park, he has now fifteen species of rodents and a bat. Interesting and previously unknown habits are frequently revealed by this method of close study.

Dr. Charles T. Vorhies, of the College of Agriculture, University of Arizona, was under temporary appointment during November to complete field investigations of the life habits of the kangaroo rat (Dipodomys spectabilis) in New Mexico, in connection with cooperation in progress. It is planned to publish the results of this work as a joint contribution from the Bureau and the University of New Mexico.

Mr. Edward A. Preble returned to the office on November 12, and is nearly restored to his usual state of health.

ECONOMIC INVESTIGATIONS

Mr. James Silver completed a trip through the New England and Middle Atlantic States to confer with State Extension Service officials, farmers,

and orchardists and to obtain information regarding losses which have been caused by meadow and pine mice, woodchucks, cottontails, European hares, and other rodent pests and as to the present abundance and destructiveness of these animals. Valuable information was secured and much interest aroused in the matter of putting into effect adequate control measures. He also conducted investigations in Virginia and West Virginia and demonstrated to orchardists effective procedure in controlling depredations of pine mice in orchards. Further investigations are in progress and arrangements have been made for additional demonstrations.

Mr. Frank G. Ashbrook has continued an extended trip to investigate conditions prevailing on fox ranches in the northern States and Prince Edward Island, and other points in Canada, and will reach Winnipeg the latter part of the month. The trip includes attendance at the annual Silver Fox Show, at Muskegon, Mich., December 7 to 9.

Dr. Karl B. Hanson visited a number of fox ranches in the New England States to study disease conditions occurring among silver foxes and to arrange for cooperation with fox breeders in studying these diseases and the application of preventative and curative measures. He has been invited to act as examining veterinarian at the annual Silver Fox Show at Muskegon, and arrangements have been made to this end.

Predatory Animal Inspector M. E. Musgrave again comes in for congratulations on a well-placed shot which dropped a large black bear that was charging Mr. Miller, a companion hunter. This bear, which was notorious as a live-stock destroyer and is reported to have been one of the largest black bears ever killed in the State of Arizona, was stopped within four feet of Mr. Miller.

FOOD HABITS RESEARCH

Mr. E. R. Kalmbach is continuing his work on methods of controlling blackbird depredations in Imperial Valley, California. In one particularly successful experiment more than 5,000 of the birds were killed in one day.

Interesting data on the cost of operation of two types of government-owned motor vehicles were obtained during the summer. A Harley-Davidson motorcycle with side-car used in the mountains of Colorado during two months was driven about 1,500 miles at an average cost of 2.7 cents per mile. A Ford truck used during four months in Minnesota, part of the time during a severe rainy season and on very bad roads, attained a mileage of 2,560 at an average cost of 3.35 cents per mile. Put in another way, the truck was operated three and a half months at a total cost of \$79.29, providing all transportation for two men and their equipment during the period. The result shows not only a very great economy over the use of common carriers, but a great deal more work accomplished due to freedom of action and elimination of delay.

GAME AND BIRD RESERVATIONS

On November 7, the Secretary issued a regulation requiring that nets and other set fishing tackle be tagged to prevent violations of the laws of the State of Arkansas on Big Lake Reservation, to become effective on and after January 1, 1922.

Warden George M. Riddick, of Big Lake Reservation, Arkansas, reports that during the month he caught seven men shooting on the Reservation. One was convicted and fined as a violator last year. All will be prosecuted where there is sufficient evidence.

Warden Riddick also reports that there was a larger flight of mallards in that section than he has seen since he has been at the Reservation and that more Canada geese have been seen going South over Big Lake this autumn than usual.

Warden William Jenkin, of Chase Lake Reservation, North Dakota, reports that he saw a flock of white cranes (evidently whooping cranes) on November 8, the first he had seen for years. Ducks are scarce at the Chase Lake Reservation this autumn but geese have been plentiful, far exceeding last year, and are staying longer. Grouse are abundant on the refuge this year, and the Warden attributes this in large measure to the State law regulating the use of dogs.

Game Warden Ransom informs us that thousands of ducks seem to be flying nightly after sunset into the Nine-Pipe Bird Refuge, Montana, and into adjoining potholes and ponds, but, on November 17, he was surprised while on a steamer crossing Flathead Lake at not seeing a single duck or goose, even with the aid of field glasses. Ranchers near Nine-Pipe Refuge state that during the daytime practically all the ducks leave the Refuge and go to Mission Creek within the north boundary of the National Bison Range in the Flathead Valley, and return to the Refuge after dark each night.

The Tampa Bay Group of Bird Refuges, Florida, was badly damaged by the recent hurricane. Passage Key was completely washed away and the foliage on Bird Key was badly wind whipped.

Thousands of swans are reported by Warden Benson to be at the Lake Malheur Refuge, Oregon, and the ducks and geese are very plentiful there.

We have been informed of the death of Mr. Allen Mason, who has acted as Assistant Warden of the Quillayute Needles Bird Refuge, Washington, during the nesting season, for several years. Our sympathy is extended to his family.

MIGRATORY BIRD TREATY AND LACEY ACTS

Chief Warden Lawyer returned to Washington on November 23 after a three weeks' official trip through the Mississippi Valley region, where he conferred with members of the field force, State game officials, sportsmen,

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and others interested in game conservation. While at Vicksburg, he assisted in the organization of a State sportsmen's association for Mississippi.

The mourning dove, locally called the Carolina or turtle dove, is a migratory bird coming within the protection afforded by the Migratory Bird Treaty and the Act of Congress to give it effect, even though individuals of the species remain within the borders of certain States the entire year, according to a decision rendered in the case of the United States against Joseph H. Lumpkin, brought to trial at Athens, Ga., November 14, before Federal Judge S. H. Sibley and a jury.

The defendant, who was charged with killing mourning doves during the Federal close season, contended that the birds which he had killed had not migrated but had remained in Georgia the entire year, and for this reason were not covered by the Federal statute. The case attracted widespread attention and was attended by prominent attorneys of Georgia. The court held as a matter of law that the mourning dove is protected by the Migratory Bird Treaty, Act, and Regulations, and instructed the jury that the only question of fact to be decided by it was whether the defendant actually killed mourning doves in the close season, as charged in the indictment.

The trial consumed two days and resulted in a verdict of guilty and the imposition of a fine of \$25 and costs. Col. John W. Henley, Assistant U. S. Attorney, handled the case for the Government and was assisted by R. W. Williams, Solicitor for the U. S. Department of Agriculture. Dr. Alexander Wetmore, Assistant Biologist of this Bureau, furnished expert testimony concerning the migratory habits of mourning doves.

In the November issue of THE SURVEY an error appeared with reference to the addresses of Mr. Charles A. Jakways and Mr. William Otto, newly appointed U. S. deputy game wardens. Mr. Jakways' address is Helena, Mont., while that of Mr. Otto is P. O. Box 757, Helena, Ark.

The following appointments were made to the position of U. S. deputy game warden during the month of November:

Seymour R. Ingersoll, Ballston Spa, N. Y.
Henry V. Oldham, Hoxie, Ark.
Arthur G. Stedman, Newport, Ark.
Joseph A. Gannaway, 1226 Sixth St., Arkadelphia, Ark.
John Hinson, Snow Lake, Ark.
Ashberry J. Payne, Camp A. A. Humphries, Va.
Earle M. Manint, 312 Highland Ave., Houston, Tex.
Robert Nolan, Atlanta Hotel, Galveston, Tex.
Moody Creighton, 219 N. Wolf St., Baltimore, Md.
Frank S. Grouse, Box 183, New Richmond, Ohio.
Harry T. Johnson, 111 N. Fourth St., Albuquerque, N. Mex.

Appointments of the following U. S. deputy game wardens were terminated during the month of November:

George W. Staton, Baxter Springs, Kan.
 Joe F. Sharp, Moiese, Mont.
 Harry B. Smedley, 207 W. Hauser St., Marceline, Mo.
 Arba H. Bridges, 4014 Wentworth Ave. So., Minneapolis, Minn.

Cases Terminated - Reports received during November.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Birsch	1	Virginia	Offering aigrettes for sale	\$25
Bloxsom	1	Virginia	Offering ducks for sale	\$10
Bloxsom	1	Virginia	Trapping wild ducks in close season	\$10
Bloxsom	2	Virginia	Selling wild ducks	\$50 each and bond of \$1,000 as guarantee for future observance of law.
Bloxsom and Nottingham	1	Virginia	Killing snipe in close season	\$10
Bloxsom and Nottingham	1	Virginia	Possessing dead curlew	\$10
Bloxsom and Nottingham	1	Virginia	Killing green heron	\$10
Farnham and B. E. Smith	3	New York	Killing shorebirds and herons	\$10 each
Hoffman	2	Alabama	Exceeding bag limit on doves	\$15 each
Linebaugh	1	Kentucky	Possessing wild ducks in close season	\$25
Linebaugh	1	Kentucky	Killing blue heron	\$25
Merrill and McQuirk	1	Illinois	Possessing ducks in storage in close season	\$25 and costs
Minges*	1	Missouri	Hunting from a motorboat and killing a loon	\$25 and \$12.07 costs
Shaver	1	Minnesota	Selling wild ducks	\$75 (\$25 for each bird sold)
Shupee	3	Texas	Selling wild ducks	\$10 each
Shupee	2	Texas	Killing meadowlarks	\$10 each
Shupee	2	Texas	Hunting ducks after sunset	\$50 each; jury trial
Shupee	2	Texas	Attempting to kill upland plover	\$25 each
Whitehead	1	Georgia	Killing mourning doves in close season	\$25 and costs; jury trial
Walker	2	California	Hunting ducks after sunset	\$35 each

* U. S. Deputy Game Warden

Cases Reported to Solicitor for Prosecution.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Alexander*	1	Texas	Killing wood duck
Alexander*	4	Texas	Possessing dead wood ducks
Anderson*	1	Nevada	Killing gulls and killdeer
Asmuth and Elliott*	2	Wisconsin	Hunting ducks after sunset
Asmuth and Elliott*	1	Wisconsin	Killing ducks in close season
Baker*	1	Massachusetts	Killing sanderlings
Bergquist*	1	Illinois	Killing flickers
Bergquist*	1	Illinois	Hunting insectivorous birds
Birsch	1	Virginia	Offering dead body of great blue heron for sale
Bloxson	1	Maryland	Possessing dead wood ducks
Broussard and Shupee	4	Texas	Hunting ducks during close season
Bullock	2	Massachusetts	Killing sandpipers
Farnham and Birsch	1	Virginia	Killing a pileated woodpecker
Farnham and B. E. Smith	4	New York	Killing bitterns
Hilliard, Pierce*, and Hall	4	New Jersey	Hunting ducks after sunset
Hilliard and Pierce*	7	New Jersey	Hunting ducks after sunset
Hilliard and Pierce*	2	New Jersey	Killing wood ducks
Hoffman	2	Alabama	Exceeding daily bag limit on doves
Johnson*	1	So. Dakota	Hunting ducks after sunset
Johnson* and Kelsey	1	So. Dakota	Hunting ducks after sunset
Kelsey	4	So. Dakota	Hunting ducks after sunset
Kelsey	1	So. Dakota	Shooting at bitterns
Kelsey and Johnson*	1	So. Dakota	Hunting ducks after sunset
Larkin and Visart	2	Oklahoma	Killing doves during close season
Larkin, Delman, and Visart	2	Oklahoma	Killing doves during close season
Lindgren*	3	Illinois	Killing insectivorous birds
Lindgren*	1	Illinois	Killing grebes
Lindgren*	2	Illinois	Killing thrushes
Lindgren*	1	Illinois	Killing warblers
MacGary*	1	Indiana	Killing grebes
MacGary*	1	Indiana	Killing ducks during close season
Merrill	1	Indiana	Possessing a dead heron

Merrill, B. G. and D. F.*	2	Illinois	Killing woodpeckers
Merrill and Lindgren*	1	Illinois	Killing woodpeckers
Minges*	1	Missouri	Hunting from motorboat and killing loon
Mushbach	1	Montana	Hunting ducks after sunset
Pacetti and Whitehead	3	Georgia	Killing doves during close season
Perry	1	Louisiana	Selling ducks
Perry	1	Louisiana	Purchasing ducks
Shupee	22	Texas	Hunting ducks from motorboat
Shupee	2	Texas	Possessing ducks during close season
Shupee	1	Texas	Shooting at ducks during close season
Shupee	1	Texas	Killing bitterns
Shupee	6	Texas	Killing insectivorous birds
Shupee	2	Texas	Killing sandpipers
Smith, B. E.	2	Maine	Hunting ducks after sunset
Smith, C. P. S.	1	Iowa	Illegal transportation of ducks
Smith, C. P. S.	1	Iowa	Killing wood duck
Smittle	1	Iowa	Hunting ducks in close season
Stadlmeir	1	Rhode Island	Hunting ducks after sunset
Steele	1	Oregon	Killing bandtailed pigeons
Taylor*	2	New Jersey	Killing wood ducks
Vanselow*	2	Illinois	Killing grebe
Vanselow*	2	Illinois	Killing sandpipers
Visart and Thomas*	2	Arkansas	Killing ducks and coot in close season
Visart and Thomas*	1	Arkansas	Killing bitterns
Whitehead	3	Florida	Hunting ducks in close season

*U. S. Deputy Game Warden

ALASKA DIVISION

Dr. Seymour Hadwen, Chief Veterinarian, Alaska Reindeer Investigations, and Mr. Lawrence J. Palmer, Assistant in Charge, Alaska Reindeer Grazing Investigations, reached Washington on November 14, and are now at work preparing their reports on the result of their investigations which began in that Territory in August, 1920.

A telegram received on November 29 from Fur Warden O. J. Murie, at Fairbanks, states that the jury in the conspiracy case against Vachon Brothers in connection with the seizure of a large number of marten and beaver skins in 1919, returned a verdict of not guilty. The court, however, ordered the furs involved turned over to Mr. Murie pending further action.

Reservation and Fur Warden Donald H. Stevenson, stationed at Unalaska, will spend the next three months making a reconnaissance survey of Unimak Island, the largest island in the Aleutian Chain. He will investigate the grazing possibilities of the island, as well as its bird and animal life.

Chief Fur Warden Ernest P. Walker, at Juneau, recently arrested and secured the conviction of three Indians for trapping beavers out of season. Fines of \$200 each were imposed.

The gas-schooner "Hazel," used in connection with reindeer investigations along the coast of Bering Sea, will undergo repairs this winter in order to make it more seaworthy and more comfortable for the use of Bureau representatives.

Press dispatches state that the State Conservation Commissioner of Michigan has contracted for the delivery of sixty reindeer to be shipped from Norway next February, for propagation purposes. The herd will be in charge of three Laplanders who will remain until State employees have become proficient in the care and rearing of the animals. The outcome of this experiment in propagating reindeer in Michigan will be watched with great interest.

Letters have been addressed to nearly two hundred fox-farmers in Alaska requesting reports on their operations during the past year. These reports will be of use in the preparation of a publication on fur-farming in the Territory.

